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[Special Editorial Correspondence.]

SOME ACCOUNT OF THE SECOND ANNUAL MEETING OF THE AMERICAN GAS INSTITUTE.

WASHINGTON, D. C., October 16, 1907.

Dear JOURNAL: He indeed would be a bold carper who ventured utterance to the thought at 10 A.M. to-day, that the American Gas Institute did not have a mission or that such mission was not to be developed. Ranged before President Clark this morning, in the handsome session's hall of the New Willard Hotel, were well over 300 representatives of the gas industry of America, all equipped by preparation to render unto each other alike, in fact, figure and thought, matter that was to better the industry, the manifold phases of which appeal more closely to the domestic relations of our entire people than do those of any other great industry. The delegates were from every section of the States and Canada, and foreign lands were represented by a visitor from Brazil, Dr. Morpurgo, the Inspector of Public Lighting for Rio Janeiro, in which city at this time Mr. A. B. Slater, Jr., whose good services to the American Gas Light Association as its Secretary are vividly remembered, is constructing a gas plant fitted to meet the gaseous needs of that greatest of South American marts. Skilled in the art of directing, President Clark, flanked, of course, by Secretary Dunbar—the mention of whose name brings to mind the fact that this year he insists upon being relieved of further duty in the secretarial line—the regular order was taken up shortly after 10 o'clock by the introduction of the Honorable H. B. T. MacFarland, President of the Board of Commissioners for the District of Columbia, whose welcoming words (for such they surely were) were neatly answered by Capt. Wm. E. McKay, in that able naval gas man's best vein. In fact most of his confreres were "far from knowing" how witty the Captain could be, especially when responding to a salute similar to the one trained upon the delegates by the Hon. Mr. MacFarland. These things happily settled, President Clark called Vice-President Prichard to the Chair and the members listened to an inaugural message which was characteristic of the man. In it he dwelt forcefully upon many things of vital moment to the industry, more particularly so perhaps in respect of the attitude to be maintained by it towards the encroachments of the legislatures, many marked examples of which were put out in the past year, particularly so in the instances of New York and Wisconsin. The message as a whole was an excellent one and its suggestions are now being considered by a committee comprising Messrs. James T. Lynn, Wm. E. McKay and R. B. Brown. Then followed the Report of the Board of Directors, in which was embodied the Reports of the Secretary and of the Treasurer. The first was lengthy and important, in that it contained recommendations of a nature that would cause notable changes in the active working of the Institute. Prominent in these were the suggestions that the offices of Secretary and Treasurer be combined, that Committees on Technics and on Public Relations be named and that permanent headquarters had been located in the Engineering Societies' Building in New York. The reports were adopted in their entirety, after which the Institute listened to the annual report of Secretary Forstall, in the matter of his custody of the moneys and his general

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direction of the work of the Gas Educational Fund and the Practical Class teaching made possible thereby. That the heretofore excellent results accomplished were being maintained, and even enlarged, was well attested by the figures and facts submitted. It should be here remarked that the accessions to membership during the year were just short of 150, bringing the total roll up to 1,222. The next number was an excellent address by Mr. Charles H. Dickey, of Baltimore, on "The Obligations Imposed by the Possession of a Franchise." The speaker handled his theme in vigorous, telling phrases, and his conclusions were reached in a rousing round of applause. The "picturer" now "snapped" the assemblage, and the morning's session was declared at an end. The weather conditions are nothing short of superb, and it speaks well for the zeal of the delegates, when it is said that even the glories of a perfect October day in the Nation's Capital were unable to attract them from the business in hand. The indefatigable and debonair Mr. Dickey and his associates on the Committee of Entertainment were unremittingly successful in their ministrations for the comfort and pleasuring of their guests, of whom at least four score are of the American beauty type.

The afternoon session was called to order by Vice-President Prichard, owing to the temporary indisposition of President Clark. The proceedings were opened by a discussion on the matters outlined in Mr. Dickey's communication. The debate was an interesting one, and perhaps Mr. Paul Doty's part therein was worthy of noting, in that it brought out a round of applause. Next came the paper on "Depreciation," by Dr. A. C. Humphreys. This was a masterful and exhaustive presentation of the subject, quite some completely original thoughts over the matter being set forth. Following it, and read so as to be considered in joint discussion, Mr. W. H. Gardiner, Jr., read a communication on "Uniform Accounting and Depreciation," which emanated from the special committee of the New England Association of Gas Engineers on the named subject. These led to a lengthy discussion, the main features of which were contributed by Mr. Carter, of the New York Consolidated Gas Company, Mr. Young, of Newark, N. J., and Mr. Barker, Chairman of the Massachussetts Board of Gas and Electric Commissioners. The latter's remarks were particularly to the point; but it is matter of record that the Commissioner has the good knack of putting out his thoughts in concise way. It was generally regretted expert Marks was not present. The papers and the discussion were so prolonged that the set hour for adjournment was so well passed that two numbers on the programme had to be set over until to-morrow. Continued beautiful weather rules and the outing parties just returning to the Willard all report "the time of their lives."—C. C. F.

WASHINGTON, D. C., Oct. 17, 1907.

Dear JOURNAL: The proceedings of the second day were commenced at 10:30 A.M., and President Clark at once called for the budget from the Wrinkle Department, which was handed in by the Editor, Mr. Milan R. Bump. Amidst many congratulations and compliments the budget was accepted and those in charge of the work were asked to continue it. That the effort in this direction was fruitful is best shown in the statement that the budget this year held 76 Wrinkles. In fact, the presentation looked the best of any heretofore made. Mr. W. H. Gartley now read the report of the Committee on "Methods of Taking Candle Power." It was a lengthy and well arranged statement, and its compilation must have taken up much time in study and experiment. The only regret that there is to it lies in the thought that the Committee failed to make more definite recommendations as to the adoption of a general secondary standard, for this subject, which has received much attention from students, will also continue to attract the practical man as well as the student. Detroit, Mich., having been selected as the place of meeting for 1908, the report of the Committee on President's Address was read and accepted - Chairman J. T. Lynn, who read it, was led to make an involuntary remark or two over the effective difference between gas arcs and incandescent electric bulbs. Here came in a series of actions that lent untoward interest to the session, and which have (to the memory of the writer at least) not heretofore been recorded in the annals of the meetings of American Gas Associations. The Nominating Committee split on the ticket to be named, Mr. S. J. Fowler submitting a minority report, save in respect of the members to serve on the Board of Directors for a 2-year term. These latter (Messrs. J. H. Jourdan, K. M. Mitchell, Walton Forstall, E. G. Cowdery and J. A. Norcross) were at once chosen by ballot deposited by Secretary Dunbar, and then came the contest for the three chief executive positions—no name was submitted for Secretary and Treasurer, the selection on such accounts having been put over until to-morrow. The "regular" ticket was thus composed: President, A. C. Humphreys; First Vice-President, W. H. Bradley; Second Vice-President, W. A. Baehr. The members' ticket was: President, C. F. Prichard; Vice-President, H. L. Doherty; Second Vice-Presiddent, W. A. Baehr. After much debate and counter motioning, in process of which the Chair's rulings were in no sense detrimental to the "regular" ticket, a secret ballot was ordered. All this brought the time quite beyond the hour set for adjournment, and when the voting was done a recess was ordered with canvassers busily engaged in counting the votes. That the offering on account of Mr. Bradley was not for him was clearly made plain by Mr. W. A. Wood, who formally and flatly declared he was authorized to speak personally for Mr. Bradley refusing to accept the nomination. However, Mr. Wood's disclaimer received no heed, and the influence of Mr. Bradley's name remained with the "regulars'" ticket.

The business of the afternoon session was ushered in by the report of the tellers of election, and the subsequent announcement from the Chair that these gentlemen had been chosen as the Chief Executives for the ensuing year: President, A. C. Humphreys; First Vice-President, H. L. Doherty; Second Vice-President, W. A. Baehr. In the ballotting for President Mr. Humphreys received a majority of 11, out of a total of 267 cast. I will make no reference to the speeches that followed, save to say that Mr. Prichard certainly proved himself a graceful loser. The discussion on the Gartley candle power method presentation was gone on with, and it included a noteworthy communication from the Illuminating Engineering Society, which was referred to the "Technical Committee"—this body, by-the-way looks likely to have plenty of work cut out for it. The discussion was rendered noteworthy by the part spoken therein by Dr. Hyde, of the National Bureau of Standards, and I say right here and now that if ever the Doctor is out of a job he will not be on the waiting list long; that is if any gas company is doing business in the United States where he manifests a wish for a position. The respective reports of the Committee on the "Making of Rates and Additional System of Costs," and that of "Public Policy Committee," were handed in by Mr. W. H. Gardiner, Jr. These having been threshed out the latter Committee was discharged and its duties were ordered assigned to the new Committee on "Public Relations." The Institute now listened to a lecture on "Electrolysis," by Prof. A. F. Ganz, of the Stevens Institute of Technology, and the convention certainly enjoyed a rare treat. In clear cut, incisive, convincing way the Professor during his brief narration said more practical things about this subject than were ever said before any public meeting of a gas engineering body, and we doubt if any electrical engineering assemblage was better served. The report of the Institute's Committee on Electrolytis was next presented by Mr. A. G. Glasgow, whereupon an interesting and pithy joint debate was brought off, the whole being fittingly terminated by a standing vote of thanks to the lecturer. This brought the hour for adjournment, and that was ordered. The weather continues beautiful and the interest in the meeting continues unabated. This afternoon Mr. C. H. Dickey and his aides "chaperoned" the ladies on the ride to the Great Falls of the Potomac, where an appetizing luncheon was shared. This evening the theater party is "on," so, also, is the banquet. The business untransacted, by-the-way, causes it to seem that the last day will be a long day, from the technical side.—C. C. F.

WASHINGTON, D. C., Oct. 18, 1907.

Dear JOURNAL: The banquet last evening was notable for at least two things: First, the cleverness of Toastmaster Dickey; second, the speech of Captain McKay and that which sequentially went with it. Over 300 shared in the fraternizing, and the speeches of many of the local celebrities were certainly hearty and to the point. That of Judge W. H. D. Lacy was especially acclaimed. Mr. Gartley's response to the toast of the Gas Engineer also was greeted with hearty applause.

President Clark through indisposition was obliged to retire just at the point where Toastmaster Dickey was to begin his fine work and thereafter the Maryland Beau Brummel was in complete and masterful control.

The feast was concluded by a clever speech from President-elect Humphreys. The theater party for the ladies and the subsequent little supper was voted that all was as it should have been. The weather conditions continue of the most perfect sort and the closing technical sessions are under way with an excellent attendance, and with enough in hand to keep the members busy into the afternoon. In view of the fact that the presses are anxious for your forms, the concluding chapter will have to be told in your next.—C. C. F.

[Furnished by the Secretary.]

PROCEEDINGS OF THE THIRD ANNUAL MEETING OF THE EMPIRE STATE GAS AND ELECTRIC ASSOCIATION, HELD IN NEW YORK CITY, WEDNESDAY, OCTOBER 2, 1907.

MORNING SESSION.

The meeting was called to order at 10:30, with Vice-President Carleton Macy in the Chair, owing to the absense of the President through illness.

ROLL CALL

disclosed the presence of the representatives of 35 companies.

The Chairman voiced their regrets at the absence of President Palmer, particularly as to the cause thereof, and then read the following message from Mr. Palmer:

Fellow Members of the Empire State Gas and Electric Association—I am sorry I cannot be with you to-day. I should be, perhaps, in order to hear and answer the criticism of the past year's administration, which criticisms are to be expected. When things are *done*, when important things are *attempted*, there is always criticism. Perhaps we have made a mistake. *Doing nothing* is the greatest mistake of all; but that one we have not committed. We certainly are in debt. When F. B. Gowan was elected President of the Reading Railroad the road was one of the most prosperous in the country and paying big dividends. After he had managed it for some time, at a dinner one of the speakers claimed that Mr. Gowan was a great public benefactor, because when he took hold of the road none but the rich could afford to buy the stock, and at that time the price had dropped so much that even the poor could buy it. Perhaps some of you think that is the kind of management we have given this Association. We certainly are in debt, but we have *attempted* things, and we have *done* things; and when you come to weigh them you will find them certainly worth while, the money well spent, the debt a profit to us. I wish to call your attention to a few things accomplished. The Public Utilities Bill, as originally drafted, among other bad features prevented any company from going to its bank and borrowing even a small amount of money without the consent of the Commission. This would absolutely prohibit most of us from doing business. It allowed, as did the previous Commission bill, these blanket, cutthroat companies, organized before the bill was passed, to do business anywhere and everywhere. The Association, through its Executive Committee and attorney, had both of these provisions changed, as well as some others. This alone is worth to the companies of the State all the money it has spent.

Anyone who attended the meeting in Albany, called to consider the question of candle power of gas, knows what a sorry figure we would have made before the Commission if we appeared before them without the discussion which took place that night. The same can be said of the meeting called to consider the question of testing electric meters. By means of these meetings called by this Association the lighting men of this State were able to make a dignified and practically unanimous presentation of their views before the Commission.

The attitude of this Association in all matters has, I am positive, convinced the State Commission of Gas and Electricity and the Public Service Commission that the companies that compose this Association are trying to deal fairly with them and with the public. It certainly is of vital importance to us all that this has been accomplished.

Our Publicity Bureau, under the management of Messrs. Curran and Mead, has been disappointing to some of you, as I have heard. This certainly has not been their fault. It is necessary, first, to obtain the confidence of the papers before anything important can be done. This takes time, and we must not be too impatient. Many papers are publishing these articles. They have succeeded in getting the confidence of these papers. Not only that, but the public who read the articles have learned that the up-State companies are taking a fair and honest stand in all matters of importance to the public. Is not this the real object of the work? The public had been led to believe that the lighting companies were tricking the public, were corrupt and dishonest. Through this work the Association has been shown to be in favor of control by a State Commission, that they have been working with the Commission to solve in a fair way the problems which affect the public.

This Association, through its Executive Committee, has appointed numeroug committees who are actually *working* and *doing* things which you will agree with me is different from the ordinary committee. This work will be more particularly explained in the report of the Executive Committee.

One thing which I wish to especially speak to you about is the work of your Secretary. He has been up and doing. He has given his whole time to the work of this Association, and has accomplished much. He should have credit for most of what we have done and he has made an ideal Secretary. He certainly should be re-elected.

As I said at first, this Association is in debt and the debt must be paid. If the work begun is to be carried on a much larger revenue must be obtained. I suggest that the dues be largely increased, at least doubled, perhaps quadrupled. *Everyone* must do his share, if not the work must stop.

Will this Association be worth keeping up if all we do is to meet once a year and listen to interesting papers? We might as well disband. If we are going to *do anything worth while* we must have money, and every member should certainly contribute his share. If what has been done is not satisfactory to you, gentlemen, then suggest and do something different; but *do something*. I urge you to put your shoulders to the wheel, and your hands in your pockets.

The President—You have heard the message. What action will you take upon it?

Mr. W. W. Cole—I move that a vote of thanks be extended to the President for his work during the past year, and that the message or report of the President be received, accepted and spread upon the minutes. [Seconded and adopted.]

The President called for the

REPORT OF THE EXECUTIVE COMMITTEE,

which was as follows:

The last 12 months have been of exceptional importance to those connected with the gas and electrical industries throughout the country, but especially to those operating in New York State. In 14 legislatures bills were introduced providing for some method of State regulation, and in two States (Wisconsin and New York) such bills were passed and became the law. The agitation in New York State, the general discussion of the public utilities law, the change from the old Commission of Gas, Water and Electricity to the two Public Service Commissions, and the general questions which have come before the Commissions to decide, have all afforded opportunities for our Association to show whether it could be of any real and vital benefit to its members and whether it could justify the hopes entertained by its founders.

Your Executive Committee in sugmitting the following report feels satisfied that the Association has *not only* justified its existence but that in the work it has attempted to do and in the results accomplished it far surpassed the expectations of even the most enthusiastic among its early members.

Publicity.—At our last annual meeting the Executive Committee was authorized to proceed with the establishment of a "Publicity Bureau." A considerable amount of time was devoted to investigating the question, and estimates were obtained from several different persons, but it was finally decided that the best arrangement that could be made was the one proposed by Messrs. Curran and Mead, and a contract was, therefore, entered into for 1 year from December 1, 1906. The estimated cost of the work, including the maintenance of the Secretary's office, the Secretary's salary and travelling expenses, was about $11,000. As over half of this has been promised, your Committee felt justified in proceeding without waiting for the full amount to be actually subscribed, believing that there would be no trouble in raising the balance of about $5,000 which was needed. It seems absurd to imagine that in New York State, with over 400 lighting companies, there would be any real difficulty in abtaining this comparatively small amount. The need of such work as has been done was never more urgent than during the last year, and we believe the Association should be congratulated upon the action taken at their last meeting in authorizing these arrangements. Mr. Curran will submit a report of his work, so there is no necessity for our explaining it in detail, but it may be well to follow it in connection with the different subjects which have come up for consideration and action, and to then leave it to the members to decide whether it has been worth while.

Governor's Message.—When Governor Hughes sent his message to the legislature the first of January it was thought to be a good opportunity for the Association to publicly take some stand in relation to the general subject of State regulation as recommended by the Governor. It should be remembered that the Association has always

taken an attitude friendly toward regulation by a State commission, and had been quite active in the enactment of legislation creating the old Commission of Gas, Water and Electricity. We were, therefore, in a somewhat embarrassing position in regard to a recommendation to abolish this Commission and to consolidate it with the Railroad Commission. An article was, however, prepared and accepted by a paper here in the city and was copied by many papers throughout the State. This article was treated editorially by a Jamestown paper. You will, therefore, see that the Association and its policy were brought to the attention of at least one member of the present Public Service Commission, of the second district, at a very early date, Jamestown being Commissioner Stevens' home city.

Utilities Bill.—Following the recommendations of the Governor's message the utilities bill was finally presented by Senator Page and Assemblyman Merritt. The attitude of the press throughout the entire State was favorable to the passage of the bill, although many defects were pointed out by different papers. It was generally taken for granted that the lighting interests were opposed to the measure and in fact were opposed to any regulation at all. The publication, therefore, of an authorized statement from the President of this Association, created considerable surprise, not only among the newspapers themselves but among the public generally. Mr. Palmer was quoted as follows: "We believe in a commission and stand ready to support the commission idea embodied in the public utilities bill just as we always have the present commission. We are not going to fight the bill and, with the exception of a few lesser points in it to which some of our members object, we shall support it as a measure, heartily and strongly." This statement came at the end of an article from which the following sentences are taken: "The Association will appear by counsel at the hearings on the Hughes measure at Albany and state that, while it does not indorse a few minor provisions of the law, it is heartily in accord with its spirit and the principle which it embodies." Also, "In speaking in favor of the public utilities bill at the committee hearings, counsel for the Association will frankly state the few minor points which its members do not all favor." Again, "Two years ago the Empire State Gas and Electric Association was founded by lighting men from all over the State outside of New York city. * * * Its members believed then, and assert that they still believe, that regulation by a commission, after due hearing, is better for the interests of the lighting companies as well as the public, than 'strike' legislation and indiscriminate attacks from self-seeking politicians." As this article and the one just read define the public policy of the Association as understood by your Executive Committee, they have been given considerable prominence. Their publication in the papers of such places as New York city, Jamestown, Auburn, Lockport and so on, thus brought our position towards the general question of State regulation to the attention of many of the members of the present Commission in such a forcible manner that it cannot easily be forgotten.

It is not our purpose to take up in detail the different articles sent out by the publicity bureau, but merely, as stated, to follow the connection between these articles and the work which the Association has been doing. That they have had very great effect is clearly shown by the cordial manner in which the Commissions of both districts have met the Association and have been willing to give our recommendations full consideration.

Gas Standards.—While the discussion of the utilities bill was at its height a notice was sent out by the Commission of Gas, Water and Electricity for a hearing on the subject of establishing standards of illuminating power and purity for gas. Your Executive Committee felt that the Association could be of assistance in this matter and, therefore, called a meeting of those members connected with gas companies to be held in Albany on the night before the hearing. There were about 25 present at this meeting, and it was soon found that many different opinions were held on all questions which were to be considered the next day. However, after considerable discussion, it was decided to unite in a request for the Commission to approve the appointment of a committee who could investigate all the details of the questions thoroughly, and submit a report at some later date. The Commission approved this suggestion, but stated that, as the hearing had been called and was a public one, they would like to have the opinions of those present. Had it not been for the meeting on the night before, many different suggestions would have been made; but as the differences of opinions had all been threshed out in private, the speakers all followed the same lines and urged the same standards, evidently making a very favorable impression on the Commissioners. The hearing adjourned and a committee was appointed which consisted of Dr. Alexander C. Humphreys, Mr. A. E. Forstall and Mr R. M. Searle. The general opinion seemed to be that this hearing was handled the best of any that has been held, that the suggestions were presented and received in the most satisfactory manner, and that the approval of the appointment of the committee was of enormous value, not only to the gas industry in New York State, but to the gas industry generally. You are probably familiar with the very complete report of this committee and its recommendations, which, although not followed exactly in the rulings of the Commission, was evidently very carefully considered and was an important factor in preventing a ruling which would have been more severe than that which was made. The members of the committee deserve your hearty thanks for the time and thought devoted to the preparation of this report and the Association is to be congratulated upon having been able to secure their services and co-operation.

In connection with this hearing and the work of this Committee several articles were sent out by the Publicity Bureau which stated that, although the prices of oil had gone up almost 100 per cent. in the last 10 years, the price of gas had gone down almost 50 per cent. Also, that the cost of manufacturing had increased in other directions while the the price to the consumer had steadily been decreasing. Among the more important places where this article was published the following might be mentioned: New York city, Buffalo, Auburn, Poughkeepsie, Binghamton, Hudson and Niagara Falls.

Lake Champlain Meeting.—After the utilities bill was signed and became a law it was thought wise to have a meeting of the Association to consider the various features and to outline some policy to be pursued. Accordingly, notices were sent out for a meeting to be held at Lake Champlain, immediately following the convention of the Street Railway Association. We regret that the meeting was not better attended, but an unusual amount of important business was transacted which will doubtless be very beneficial.

Mr. J. H. Shanahan, the ex-President of the Street Railway Association, very kindly stayed over after the meeting of his Association, spoke about some method of co-operation between the two Associations, and expressed the hope that in time something could be done to bring them closer together and to afford them the opportunity of uniting their efforts in any matter of interest and importance to both industries. The meeting last night at Madison Square Garden is an outgrowth of this suggestion, and should pave the way for more intimate relations between the two Associations in the future.

At this meeting at Lake Champlain your Executive Committee was requested to appoint three committees which are known as the Public Utilities Committee, the Accounting Committee and the Insurance Committee. As each of these committees will submit a report later, and will state what they expect to accomplish, we will merely say we appreciate the willingness shown by those appointed to serve and believe they will be the means through which much will be achieved in the lines of their investigations. We trust that all of the members will assist the committees and co-operate with them by furnishing all information desired and by communicating with them freely any suggestion they may have to make. If this is done much may be expected, but without such active approval and assistance the committees will be very much hampered in their investigations and their conclnsions and reports unnecessarily delayed.

Meter Hearing.—A situation very similar to that which arose in connection with the gas hearing which has already been described was brought about by a notice from the Public Service Commission of the Second District, that there would be a hearing on August 28th, at Albany, on the subject of inspection of electric meters, in accordance with the provisions of the utilities law. Notices were sent to all companies connected with the electrical industry that a meeting would be held in Albany the evening before the hearing, in order to determine what the general feeling of the companies was as to the best method of enforcing the provisions of the law. There were between 30 and 40 present, and it was decided to again ask the Commission to approve the appointment of a committee to co-operate with them in their investigations, to see if some method could not be devised which would comply with both the spirit and the letter of the law and that would not be a hardship on the operating companies. At the hearing next day Commissioner Stevens stated that the Commission welcomed such efforts towards friendly co-operation and would be very glad to approve the appointment of a committee. He, however, was anxious to obtain the opinions of those present, some of whom had not been at our meeting the night before, and proceeded with the hearing. Again there was an unanimity in the suggestions made which was due to the discussion which had already taken place, and after the general hear-

ing the Commissioner asked our Vice-President, Mr. Macy, to take the chair in the absence of the President, and to proceed with the appointment of a committee. Late in the meeting you will hear a report of the work of the Meter Committee, so far, and Mr. Searle will tell you of the general meter situation in the State. We believe that this hearing, and the hearing last February, in regard to the subject of gas standards, constitute perhaps the strongest arguments which could be advanced as to the actual use of an Association of this character. To have these general questions handled in the friendly way which has been done, and to have been permitted to submit recommendations through a representative committee, is not only of general benefit but is a benefit to each individual company operating in the State, and will be so considered by them if they will take the time to consider the matter at all.

In connection with this hearing several articles were sent out by the Publicity Bureau which have set forth very plainly the fact that an electric meter is much more liable to run slow than it is to run fast, after explaining something of the delicate mechanism and the need for proper care and supervision on the part of the company itself. Mr. Curran, I believe, will read to you an editorial on this subject which was provoked by these articles, which is interesting not only on account of the local importance but more particularly as showing the effect which the work has had.

Summary. – The willingness of Commissioner Stevens and his associates to approve the appointment of the committee and to recognize the Association as the authorized representative of the industries in New York State, are evidences that the articles which have been sent to the newspapers from time to time have been read by the Commissioners, who have in this way became aware not only of the existence of the Association but also of its attitude towards the Commission generally and the willingness which it has shown in the past in trying to aid a fair solution of questions which have come up. This in itself we think more than justifies the amount which has been spent on this work, but in addition it is only fair to assume that if the articles have been read by the Commissioners and have made this favorable impression upon them, that they have also been read and have made a similar impression upon the general public. Thus we have brought to the attention of the people of New York State, and to their representatives at Albany, the fact that this Association is not opposed to the general principle of State regulation; but, on the other hand, favors it as a means of relief from the "strike" bills of the past and that the policy of the Association in the solution of the numerous problems in connection with such regulation has been in fairness towards the public as well as towards the companies. Through an entirely different character of articles sent out which have set forth some of the difficulties encountered by the lighting men, we have also brought to the attention of the public certain features of the business with which they have never been familiar. The newspapers throughout the State and the country have in the past been inclined to be somewhat unfair to the lighting industries. We do not believe this attitude has always been intentional, but rather has been due to the ignorance of the true conditions which existed, and in sending to the papers of the State the articles which have come out regularly since last December, we have not only been educating the public along these lines but have also been educating the newspaper as well, as shown by the many editorials which have been written based on the information sent them.

In this report we have given considerable space to the work of the Publicity Bureau, as we appreciate that when we were authorized at the last annual meeting to proceed along these lines some members were doubtful as to the probable benefits in proportion to the cost, and all considered it more or less of an experiment. The actual cost of this work for the year will be about $6,500, which includes considerable traveling on behalf of the Association. The balance of the $11,000 mentioned covers the expenses of the Secretary's office, including travelling, etc. We feel that the response met with from the members in the matter of subscriptions has not been as prompt or as cordial as was expected. The amount asked of each member to be devoted to this work has not been large in any case in proportion to the size of the company, while on the other hand the dues charged the members have been very low indeed, aggregating only about $1,500, and the work which has been done has been of the utmost importance and of great personal value to each company. About half of the members contributed the amount asked of them, while the others held off for one reason or another, some not even answering the letters sent to them by members of this committee and by the Secretary; only three, however, having actually refused. As the benefits derived have been general in character throughout the State, each company, whether in New York city or the most remote section, should be willing to assume its share of the total costs, instead of forcing a few of the more far-sighted or public spirited companies to shoulder the entire expense.

The report of the Treasurer will show that at the present time a deficit exists of considerable proportions and your Executive Committee wishes to suggest, rather than have to rely in the future on voluntary subscriptions from the members that the dues should be raised so that a sufficient amount can be collected from them each year to carry on the work of the Association. The question also presents itself whether it would be well to admit the supply companies and manufacturers as a separate class of members. Also, whether some arrangement can be made with other organizations by which we may have the benefit of their actions and they may have the benefit of ours. We would suggest, in this connection, that a committee be appointed at this meeting to revise the constitution and by-laws and to prepare a new schedule of initiation fee and dues to be paid. The membership has grown during the past year from 48 to 65, with perhaps 10 more seriously considering the question of making applications. The activities of the Association have, however, grown in an even larger proportion and a change in the constitution and by-laws to meet these new conditions is imperative.

The policy has been steadily maintained of not taking an active part in any question of purely local importance and we recommend that the Association continues this policy, as we feel it would be extremely unwise to come out publicly either in the courts, before a State commission or in the public press, as taking sides in local disagreements between a company and either the State officials or the general public or as opposed to fair competition from a new company. We believe that it is the duty of the Association, through its executive committee, to advise any members in cases of this kind, and to furnish them with any information possible, but further than that we do not believe the Association should go.

We believe that, even considering what has been done the past year and what we now have in progress, there is still a wide field which has not been touched, partly on account of lack of funds, but more particularly on account of lack of interest on the part of the members and their failure to appreciate the enormous value which the Association has been to them in the past and can be to them in the future. We recommend a continuance of the publicity work for another year if possible without any interruption, as we believe, after very careful consideration, that this work has been a very important factor in the great progress which has been made during the last year. However, as it is not possible to raise the dues before the next annual meeting, it will again be necessary to rely entirely on voluntary subscriptions, and we would, therefore, advise that no agreement be made until the full amount necessary shall have been either subscribed or paid in. We cannot, however, believe that if the 65 members, with gross earnings aggregating $10,000,000, can be brought to realize that the amount asked for is not charity, but is an investment on which they have already drawn very large dividends in actual benefits derived, there will be any difficulty, not only in raising enough to pay the amount now due and which will become due by December 1st, but also enough to carry on the work of the Association for the coming year.

In concluding their report your committee wish to say that they heartily believe in the value and usefulness of this Association and its ultimate success, and that it has been their earnest endeavor to promote the objects of the Association, which are stated in the constitution as being to "Harmonize, protect and advance the interest of the gas and electric companies of New York State." They also wish to publicly thank those members who have contributed both their financial and moral assistance toward the carrying out of these objects.

The President called for

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and Mr. Freeman, on behalf of the Public Utilities Committee, spoke as follows:

First, the Committee met in New York city, pursuant to its appointment, and, under date of July-30th, issued a letter to the companies outlining the scope of the Committee's work and asking for the cooperation of the companies in the matter of sending information concerning their relations with the Public Service Commissions, so that the Committee might practically have the information from the standpoint of the companies. With respect to the old Commissions, I think I can safely say that the Committee finds dissatisfaction on the part

of the companies and a feeling of dissatisfaction in respect to the issuing of securities and the fixing of rates, and the desire to cater to public sentiment. There are certain appeals pending from decisions of the old Commission. The result of these appeals may have a very wide effect on the policy of the present Commission with respect to limitations on the issue of securities and the relation between bonds and stock issues; and the amount which companies are entitled to borrow on these securities as well. The case most recently brought to the attention of the Committee is that of the Watertown Light and Power Company, which is now appealing from a decision of the old Commission limiting securities to a point considerably below the actual investment of the Company. This Company expects to get the case before the courts in November, to see what the courts will say as to the power of the Commission to enforce such limitations.

In regard to the matter of fixing rates, I have an interesting communication, from Mr. Bradley, of the Rockland Light and Power Company, setting forth the effect of the order of the old Commission, entered June 29, 1907, just before it went out of existence, as possibly one of the most striking acts of the Commission. I will read from the concise note of Mr. Bradley describing the effect of this order:

"July 25, 1907.—Memorandum of effect of order of the Commission of Gas, Water and Electricity, dated June 29, 1907, fixing 15 cents as the maximum price to be charged per kw. for electricity in the town of Orangetown outside of incorporated villages. At the date of the order the rates in effect were 20 cents per kw. for the first hour's daily use of equipment; 10 cents per kw. hour for the second hour's daily use of equipment; 5 cents per kw. hour for all over 2 hours' average daily use of equipment, less 10 per cent. for prompt payment. These rates had been adopted by the Company, based upon a curve of the cost of operation, including interest on investment, taxes and depreciation. The income produced by these rates, after deducting discounts, averaged 14.1 cents per kw. hour. This represented an average daily use of the total equipment connected of 1.8 hours, and was less than the cost as defined above. The Commission having ordered that 15 cents per kw. hour be the maximum price charged, the Company was obliged either to operate at a greater loss than before or make the prices for all current 15 cents per kw. hour with no discount, except to half a dozen of the largest users, and only a very small discount to them. The number of consumers affected was 140. Analysis of the business done with them for the year ending July 1, 1907, shows that 26 were profitable, of whom 19 will pay increased rates; 2 were served at cost, of whom 2 will pay increased rates; 112 were served at a loss, of whom 75 will pay lower rates. Of the 140 customers served 96 will be paying rates which are further from the actual cost of their service than the old rates. It will be seen that the effect of this order is a restraint of trade and suppression of the natural law of supply and demand. Out of the 112 customers served by the Company at a loss, 75 will receive service at a greater loss, with less incentive to the Company to do business. Out of the 26 customers served at a profit to the Company, 19 must be served at an increased profit to make good the increased losses, thus providing good reason for dissatisfaction on the part of the customer and probable loss of trade. It is the popularity of electric service and the resulting long hour load curves which enable the production of current at low cost. If the long hour consumers are penalized the result is a poorer load factor, higher cost of production, fewer people benefiting by the use of current and restricted market for the service which the Company has undertaken to supply. The ill effect or injury of such action may be slow to show itself, and in the above case is perhaps not a serious matter, on account of the small volume of business, but if such a policy were extended to cover the business generally it must have a serious effect and discourage effort in the field of electric lighting."

I had the satisfaction of showing that communication to a member of the present Commission of the First District, and was pleased to receive the assurance that, as far as his efforts at least are concerned, no more orders of this kind will be issued. And I think this communication, and what can be done with it through the efforts of this Association, indicate that we have your co-operation in efforts of this character.

Now, with reference to the present Commission: Of course, the time is not sufficient yet to gain a very adequate idea as to how the companies are to fare with the present conditions. The only instance that has come to the attention of the Committee, where a company has been apparently unable to secure what it thought it was entitled to, was that of the Newburgh Light, Heat and Power Company, where an application for an issue of $250,000 of 8 per cent. accumulative preferred stock has been denied. I have an abstract from the opinion of Commissioner Decker, which would tend to indicate that the objection is based partially upon the theory that the Company could finance upon a less permanent basis. If this decision indicates that the Commission thinks an 8 per cent. return on the actual investment is more than companies should be allowed, it is a very important matter; but the information I have at hand, gathered at a late date, is not clear on that point.

Now, Mr. President, I may say the Committee is endeavoring to secure all the light possible on this point. The theory of its appointment, and the fact that the Governor and the members of the Legislature respectively think the enactment of the present law reasonable, they have stated that it is intended to be fair to the public and to the interests involved. If there are unnecessary hardships imposed in the operation of the law there should be, and it is claimed there is, a unanimous desire to prevent a recurrence of such hardships. If your Association, through this Committee, can obtain complete information from the companies, citing all the cases where such unnecessary hardships have been imposed, where delays are burdensome and unnecessary, it is believed that it is possible to submit this information so as to secure relief, even from the members of the Commission themselves, or from the Legislature. And I may say for the Committe that if the companies will co-operate in giving all the information possible the committee will endeavor to so collect this information that it may be submitted effectively and at the proper time.

[To be Continued.]

Depreciation.

[A paper prepared for and read before the Second Annual Meeting of the American Gas Institute (Washington, D. C., Oct. 16 to 19), by A. C. Humphreys, President Stevens Institute, Hoboken, N. J.]

It is intended that this paper shall supplement the paper I presented at the last meeting of the New England Association of Gas Engineers under the title, "The Present and Growing Need for the General Adoption of a Uniform System of Records and Accounts."

In that paper I stated that what I had to say was intended as a warning and an appeal and that "the day had passed when secrecy as to our accounts can be depended upon for our protection from misapprehension and misrepresentation. Secrecy necessarily leads to suspicion on the part of those not in the secret. To this proposition we must submit in spite of the fear of legislative 'strikes.'" I especially drew attention to the records and accounts published by the Massachusetts Commission and, in that connection, I pointed out that, in spite of appearances, they were strikingly incomplete and lacking in that uniformity requisite to conclusive comparisons and, hence, the dangers to be apprehended from such official reports when used by those whose object it was to misinterpret data in connection with attacks on gas companies and, especially, if so used by men who, if expert in no other way, were expert in the line of such misinterpretation and misrepresentation.

Let it be at once conceded that it is extremely difficult to devise a uniform system of accounting as applicable to any one industry; it is still more difficult to secure a uniform interpretation and application of any rules that may be laid down. In fact, anything approaching perfection as to final result is doubly difficult through variation in conditions and the unwillingness of managers and accountants to accept someone else's opinion in place of their own. And going still farther, if the conditions locally were uniform and each and every accountant concerned were determined loyally to work according to a uniform system, the records would still not be absolutely comparable by reason of the unintentional variations in application of the rules introduced through the personal equation.

This is true witn regard to the more routine matters which have to be interpreted in connection with accounting. How much more then must it be so with regard to the treatment of depreciation which must finally rest upon expert judgment.

This all may seem to suggest that it is useless to attempt to obtain a uniform practice in our records and accounts and, especially so, as to depreciation. Not so, to my mind. The more we strive to develop and maintain a uniform system of accounting, including depreciation, the more we all must be impressed with the danger of blindly accepting for comparison data on its face value – that is, without careful analysis – and the better equipped we will be to meet the dangers to be apprehended from the efforts of men paid – liberally paid – to misrepresent us through partial and distorted applications of figures derived from undigested records. For here we must not forget that these men may take separate items out of their context and use them only for the purpose then in mind, and go so far perhaps as to use the same items for contradictory domonstrations if necessity demands and opportunity warrants.

The foundation of all effort to establish and maintain a uniform system of records and accounts should be absolute truthfulness and consistency. Here at once we would be in opposition to the work of some of these so-called experts, for their work is too often based upon inconsistency.

The American Gas Light Association, of which this Institute is the successor, adopted a uniform system of accounting. In the paper read before the New England Association, as previously mentioned, I referred to this work of the American Association as follows:

"During the year 1902 a committee of the American Gas Light Association, appointed 2 years before to report on a uniform system of accounts, brought in its final report. I had the honor to be Chairman of that Committee. The Committee worked conscientiously through 2 years and brought in its conclusions subject to certain modifications which might be made as a result of additional suggestions immediately thereafter to be made by the members through the mail. A few months later the report of this Committee was published, and, in accordance with a resolution of the American Gas

Light Association was adopted as its standard uniform system of accounts.

"There was one radical defect in this report and that was the omission by the Committee of a definite recommendation on the question of depreciation. This was not due to an opinion on the part of any member of the Committee that depreciation should not be cared for. But there were differences of opinion in the Committee as to whether that was a matter with which the Committee had been charged to deal.

"The Committee rendered a report of progress at the meeting of 1901 and the draft as at first prepared contained a very decided pronouncement in regard to the necessity of caring for depreciation in a methodical way. All the members of the Committee were not present at this meeting and it was, therefore, impossible, in view of differences of opinion, to render the report in this form. Later, the Committee failed to agree on a statement to cover this most important subject and, under the pressure to complete the work within the promised time, the subject was unwisely, I now confess, pushed to one side. Personally, I have never ceased to regret that the Committee did not agree upon some statement in this connection and that, failing to agree upon a definite statement, the members of the Committee did not at least recommend that the matter be further considered and request that the subject be recommitted to enable the Committee to complete its work in this regard."

Finally, I recommended in this paper that the New England Association should interest itself in the establishment and maintenance of a uniform system of accounts, including uniformity of practice, as far as possible, in caring for depreciation and that the New England Association should co-operate in this matter, especially with the Gas Institute.

As a result of this recommendation, the New England Association appointed a committee to consider this whole question, especially in connection with representatives of the Gas Institute.

I trust that at this meeting action will be taken to reconsider the whole question of uniformity of accounts and records and especially with regard to depreciation.

The system which now bears the indorsement of the American Gas Association can well be taken as the basis for such action and, upon this foundation, can well be built a scheme capable of relieving the gas men of America of many embarrassments in these strenuous and troublous times; but this result cannot be reached unless the subject of depreciation is cared for as well as may be under the conditions so hard to meet.

Outside of depreciation the system as now adopted hardly needs revision except to better meet the demands involved in returns to governmental commissions.

To those of you who may be inclined to think that too much stress is being laid upon depreciation, I would say that, if you have to appear before a State Board, which interprets its commission to mean that where complaint is made, its duty is to cut down prices regardless to local conditions and the facts in general, you will find that, if depreciation has not been regularly charged as an item of expense, the Commission will take the position that, as there has been no such charge regularly made, there is no such item of cost or the cost of depreciation has been covered by the payments for current repairs and renewals. Nor will this acceptance of the company's accounts in the one instance prevent those sitting in judgment from cutting out other items of cost upon the testimony of partial or ignorant "experts."

If the men before whom our interests are on trial are politicians, as too often is the case, they are, according to the present fashion, listening more attentively to the voice of the public than they are to the evidence, though they welcome the "expert" evidence which favors a decision against the defendant company.

This all means that common prudence dictates that not only must our accounts give the truth, the whole truth and nothing but the truth, but they must be so constructed as to show the facts plainly, with the least possible need of explanation, and in every possible way be safeguarded against misinterpretation.

A concern operating a private business, subject to no outside supervision or control, may show its profit and loss account and assets and liabilities in any way agreeable to the proprietors. But if, in conducting our business, we are to be subject in any measure to the control and supervision of men who most likely will be ignorant as to our business and perhaps to all business affairs, and probably incapable, through lack of training, of comprehending the fine points of accounting, and if these men have the power, *prima facie*, to fix the price of gas, and in doing so to pass upon the cost of gas and the amount of capital required, using our accounts as far as possible as weapons against ourselves, then certainly this subject of accounting is one which we cannot afford to treat in any but the most serious way.

The Massachusetts companies have largely followed a practice in regard to book valuation of assets which is to-day working an injury to all the companies of the United States. The practice is by no means confined to the Massachusetts companies; but, by reason of the publicity given to their accounts through the reports of the Massachusetts Commission, which reports are neither complete nor self-explanatory, the practice as followed by these companies works a general injury to our business. In this connection I cannot do better than quote from my New England Association paper:

"Comparing certain four Massachusetts companies with New York, which Prof. Marks claimed to be fairly comparable with New York, he showed a structural value of $1.78 per 1,000 of annual sales. (This should have been stated per annual 1,000 cubic feet capacity instead of sales – an ingenious device of Marks for reducing the apparent required capitalization.) It will perhaps require a Massachusetts gas man to appreciate fully the absurdity of the analysis by which the last figure was obtained.

"My analysis of the individual reports of the companies referred to as found in the appendix showed the capital of these companies to be respectively $2.38, $2.29, $2.01 and $2.04. But the book assets, fixed and working, were $3.96, $3.50, $3.24 and $3.40. Understand, these were the book values of assets. Now, I made a further analysis and compared the book values of mains and meters with the values as derived from the schedule of those assets, and using moderate valuations for the meters, and using for the mains a valuation which Prof. Marks had stated as applicable to work outside of city limits, *which allowed for no expensive pavements*, I found that the corrected assets for the first three were respectively $4.38, $3.80 and $4.38; the last one I was unable to correct because the assets were not divided on the balance sheet. It is also to be noted that a full correction was not made because there were no schedules of services and manufacturing plant. It is reasonable to suppose that a complete correction, including these two divisions of plant, would have increased the difference between actual and book values.

"This brings me to a point which is very noticeable in the Massachusetts accounts, and which, I submit, requires careful consideration at the hands of the Massachusetts companies and the Massachusetts Commission. Prof. Marks particularly referred to the structural assets of one Massachusetts company in connection with some of his analyses. An analysis of the statements of this company showed that, during a period of 5 years, there had been a *decrease* in the *book* valuation of mains of about 9 per cent., whereas the actual value derived from the schedule had *increased* almost exactly 30 per cent.; and, furthermore, that the actual value at the first of the period was 3½ times the book value. This unquestionably is an extreme case, but it goes to demonstrate that the book value of fixed assets, as shown by the Massachusetts companies in their published reports, do not indicate by any means the actual investment in those assets. And here it is to be appreciated that men like Prof. Bemis. and Prof. Marks go on the stand, avail themselves of these published records, and from these records make the argument that the amounts shown by the Massachusetts companies as capitalization per 1,000 or assets per 1,000 are a safe criterion in the case of other companies. In other words, they claim that because they find a certain company has a book valuation for structural assets of say, $2, that figure can be safely assumed as the cost of the plant necessary for the supply of a district conditioned somewhat similarly; and furthermore, it requires cross-examination to bring out the acknowledgement that, in addition to the structural assets, an allowance must be made for working or active capital; and furthermore, as I have shown, unless the returns as published are perfectly self-explanatory, such a man as Prof. Marks can appear on the stand and claim that the active capital should not exceed 13 cents per 1,000, although the very records from which he is drawing his conclusions show, if completely analyzed, that there is required 43½ cents per 1,000.

"Again 'experts' of this kind refer to the Massachusetts Reports and, making convenient selections, show a very low capitalization per thousand of annual sales and then argue that this should establish the maximum upon which other companies should be allowed to pay dividends. The average capitalization of the 32 Massachusetts gas companies engaged exclusively in the gas business, according to the 1906 Report, is $2.88 per 1,000 of annual sales. But I have already shown how the actual capital invested in fixed assets plus the working capital is far in excess of the capital, including stock, bonds and notes payable, so it is again seen how the Massachusetts companies in their reports as published by the Gas Commission furnish a most misleading comparison in the hands of incompetent or designing men. * * * * * * * * * *

"The prudent New England industrial manager inclines to a liberal writing down of the book value of assets. If a concern owning a cotton mill or a shoe factory wishes to carry a $500,000 plant on its books at a nominal valuation of $100, simply to keep the account open, that is nobody's business except the owner's. But the proposition is very different in the case of a public service corporation subject to investigation and control.

"Even such a policy of writing down of assets as has generally been followed by the Massachusetts companies, partly of their own volition emanating from this New England prudence and partly under pressure from the Gas Commission, is unjust to the stockholders of other United States companies.

"The money actually invested and employed in the business should be shown in the asset accounts and should be represented by capital."

In connection with this quotation, it is to be borne in mind that the experts opposed to us aim to show an impossibly low rate of invest-

ment, argue for a low return on investment, manipulate their figures in every possible way to produce a low cost at the burner and then claim that the price for gas should be the amount obtained by adding the low return on a low rate of investment to the impossibly low cost at the burner.

In the above quotation from my New England Association paper, reference is made to two "experts" who have been prominent in the recent New York city and State gas hearings and litigation. Prof. Edward W. Bemis is familiar probably to all of you, at least by name, for he has been engaged for many years in the business of interpreting such data as he was able to collect, so as to reduce the value of gas properties, except in the one case of Baltimore, where he attempted, as the city's expert, to increase plant value for the purposes of taxation.

As you also probably know, Prof. Bemis endeavors to qualify as a gas expert though, if ably cross-examined, he has to acknowledge that he has had no actual experience in the gas business. In the later cases he has been practically relegated to the position of a statistician, and he certainly is an adroit one.

In the recent case of the Buffalo Gas Company before the New York Commission of Gas and Electricity, now happily legislated out of office, both Prof. Bemis and Prof. Marks appeared against the Company. I appeared for the Company as its President and as expert, and so again had opportunities to observe the methods followed by these "experts."

Although pretty well convinced that it would have no influence on the Commission, we decided to cross-examine Bemis as to his knowledge of the workings of several parts of a gas works. He acknowledged he never had made gas; never had superintended a gas plant; never had laid any gas main, but had laid over 100 miles of water main. When asked the difference between a compensator and a governor, he answered: "I won't attempt to go into technicalities." When asked whether naphthaline was a high temperature or a low temperature product, he replied: "Well, I am not specially acquainted so that I would want to testify on that. I have read a great many things upon that subject in Newbigging and other books but I do not claim to have practical knowledge." To the question: "How does a standard washer operate, what are its functions?" he replied: "Well, that again I do not claim to be a specialist on. Of course, it is for taking out many of the impurities." The further question was then put: "What do you claim to be a specialist on in connection with the practical manufacture of gas?" and he answered: "I am pretty well acquainted with the statistical side."

About 20 questions were put to Prof. Bemis later, as to the everyday procedure in connection with the operation of a gas works, which he was unable to answer.

After Bemis had thus failed to qualify as a gas expert, Commissioner Davies (former Attorney-General of New York State), who was presiding, addressing our counsel, gave his ruling as follows: "Well, we think you have qualified him and we will overrule your objection."

What a commentary on Commission control!

Prof. William D. Marks is probably not so well known to you by name as Prof. Bemis although, unlike Bemis, he has had some connection, even if limited, with our business. According to the testimony in the Buffalo case, he was engaged in 1872 in the building of the Laclede Gas Works in St. Louis—this about a year after he graduated from Yale. Had nothing to do with the design of the Laclede works. Never operated a gas works as manager. Subsequent to 1877, his gas experience was limited to a little plant in Fostoria and to the Plant in Durham, N. C. Finished with Durham about 5 years ago and has had no connection since with gas works, either as to operating or in an executive capacity.

Having omitted to include in his appraisal schedule a compensator, he was cross-examined as to his reason for so omitting this part when other less important parts had been included, he stated he had not observed the part referred to and, finally, when pressed to describe it or its function, he acknowledged that he did not know what a compensator was, and added (page 594): "If you will show me a picture of the thing you are talking about, I will tell you at once."

On page 258 Marks mentions as an item in his schedule of qualtifications as an expert, that he is the author of "The Finances of Gas and Electric Light and Power Enterprises." On cross-examination (page 386) he states he has no reason to change his views in regard to it—that is, as to the accuracy of its matter. When confronted with the statement repeatedly made in his book that 15 per cent. on the investment should be allowed for interest and depreciation (generally 10 per cent. for interest and 5 per cent. for depreciation—in a few cases 8 per cent. and 7 per cent. respectively), he repudiates the book and states he has since had reason to change his views in some particulars (page 575).

Since the New York and Buffalo cases have been heard, Marks has published the fourth edition of his work on Finances. In the preface to this latest edition, no doubt with this and other cross-examinations in mind - for this book of his has always been brought up against him as to return on capital and depreciation—appears the following paragraph:

"The suggested 15 per cent. of profit and depreciation given in some cases is only a suggestion. In large concerns 10 per cent. or less is often used."

The last paragraph of this preface is too good to escape special notice, especially when we are dealing with the subject of depreciation, and as Prof. Marks particularly claims to be an expert on this subject:

"The very commendable determination to reform these deplorable conditions, which is to-day being evidenced in our legislation for the control of quasi-public corporations is entirely proper, provided this legislation is not that of the inexpert in the subject with which it deals. Regarded from the point of view of the higher laws of nature of which there can be no evasion and from which there can be no appeal, the evil results of a blunder are quite as serious as those of a crime. I hope that this little work will be of service by presenting a rational and practical analysis of the true cost and true profits of these corporations, and in preventing blunders on the part of reformers actuated only by the best of motives."

I advise each and every one of you to own a copy of this latest edition of Marks' book. It may be of value to you, if the author appears against you. The price is $4 postpaid. No publisher is mentioned, so I presume you may order direct from the author, William D. Marks, 623 Park Row Building, New York city.

In this last edition, the first 10 chapters, comprising 361 pages, are page for page the same as the older edition; there have been added 5 new chapters. This new edition, therefore, includes all of Marks' former statements and allusions in regard to 15 per cent. on the cash investment to be allowed for depreciation and profit, including a table of "Gas Companies of Massachusetts, 1901 Report" (pp. 218 and 219), in which a column appears headed, "15 per cent. depreciation and profit per 1,000," under which the amount of 15 per cent. in cents per 1,000 is entered for 41 companies.

The new chapters are as follows:

Chapter XI.—Cost of Street Lighting, which deals entirely with estimated cost of municipal arc lights in Philadelphia, in which he allows 7½ per cent. on investment for cost of depreciation, in addition to 2.7 per cent. for maintenance and repairs of lamps, or a total of 10.2 per cent. for depreciation and repairs, and then 3½ per cent. for interest on investment.

Chapter XII.—Price of Gas and Electric Light in New York City, 1906, in which the author deals with the formation of the Consolidated Company *from the author's standpoint.*

The following quotation is from the closing paragraphs of this chapter: "The hearings of the State Gas and Electric Light Commission are still going on, and the employees and experts of these gas companies are doing their best to swell the cost of the production of gas. * * * "Like preceding Commissions, this Commission is accepting the figures furnished by the gas companies; consequently, its *conclusions will not carry any greater weight than those of its predecessors.*" As stated, this was written before the Commission had made its ruling reducing the price to 80 cents. Marks did not testify in the New York Gas Commission case, though he did later in the United States Circuit Court case, where his testimony was apparently not taken seriously by Master Masten. If Marks had had his Buffalo experience before the New York case and before writing this chapter of his later edition, he probably would have been more hopeful of the results to be obtained from the New York Commission.

Chapter XIII.—The cost and selling price of 22-candle power gas to the Consolidated Gas Company of the city of New York. Marks' digest of the New York case before the Master is in marked disagreement at almost every point with the findings of the Master, a man noted for his ability and fairness in interpreting expert testimony.

The Master in his report refers especially to Marks' lack of experience as a gas engineer and manager. The author makes a number of references to my testimony in this case, and in doing so misrepresents me.

On page 413 he says that I acknowledged on the stand that I had not examined the vouchers and accounts of cost, "but had blindly accepted

the figures furnished by the officials and employees of the Consolidated Gas Company." This statement is untrue. I did not so testify, but I did say that I had not made a complete audit, including the critical examination of each and every voucher. The fact is, I had spent months on the examination of the accounts before presuming to testify.

On pages 449, 450, he states that, under cross-examination, I was forced to recede from certain figures I had given in a table as to structural cost of certain Massachusetts companies. The facts are that I was requested by the counsel for the city, then cross-examining me, to abstract certain figures from the table, and combining them with others of his own, to make certain independent computations therefrom, thus producing the figure of $1.86, as Marks says; but, as Marks was himself in the habit of saying on the stand, this I did as the examining counsel's computer. The figures as selected by counsel gave a result which was inconclusive, and in no way contradicted my testimony as given.

Again, on page 450, Marks says that I confessed that I had used a chart of his improperly. This is absolutely opposed to the facts. The chart was one prepared by Marks to show by separate and distinct curves the cost of laying pipe of various sizes under various conditions. The curve which I had used from Marks' table to rebut his own testimony was distinctly labeled, "Cost per foot for streets with macadam tops outside of city proper, laid and surface restored," and the prices taken therefrom for the different sizes of pipes as used by me were low and eminently fair for the purpose to which I applied them. A copy of this chart will be found facing page 456, and immediately following another chart which Marks used in the Buffalo case. Now let us see how Marks used this latter chart in Buffalo. On this chart we find several curves, one covering cost per foot of pipe laid without pavement, another for cost per foot for streets in city proper with stone or macadam pavement, another for streets in city proper with brick, asphalt or block stone on concrete, and still another for cost per foot for rock excavation at $5 per cubic yard. At the foot of the chart we find a note to the effect that "figures include 10 per cent. undistributed expense and 15 per cent. contractor's profits." When Marks was *cross*-examined as to his valuation of mains in Buffalo, he would immediately refer to this chart which was obviously calculated to give the impression of great fairness and as having covered fairly all the different kinds of pavement, rock excavation, etc.; but under the pressure of the searching cross-examination it was finally brought out that *the only curve on the chart which he had made use of was the one which showed the lowest cost*, namely, "Cost per foot for pipe laid without pavement." After much difficulty we were able to get from him in figures the actual costs per foot which he said he had used. It was then found that using these figures and the accepted schedule of lengths did not produce his final result. There was a shortage of $191,273.70. When this discrepancy was disclosed by me in my testimony, it was explained (page 1293, Buffalo Record) that it was due to Marks having eliminated the 15 per cent. contractor's profit and, upon further analysis, it was found that he had not only eliminated this 15 per cent. but, in doing so, had made the mistake of multiplying by 15 per cent., and substracting, instead of dividing by 1.15, making a further difference against the Company of $34,948.

As a further commentary on Marks' chart—which appears so well typographically in the little book—and of Marks' methods on the stand, let me give a single example from the Buffalo chart. It will be found that for 20-inch "pipe laid without pavement," the figures interpreting the curve are $2.83 per foot. Now, if we eliminate the 15 per cent. contractor's profit, which is *included* in chart and which Marks *excluded* in his final figures, we have $2.46 per foot. As was shown in our testimony, the cost of the pipe on the cars at Buffalo *at the time Marks gave this testimony was* $2.47½ or 1½ cents more than Marks had allowed for the pipe laid, ditch filled and pavement, if any, replaced.

But I could continue far beyond the point where your patience would be exhausted to show that Pros. Marks' digest of the New York Consolidated case cannot be safely accepted. It may be sufficient to remind you that the contentions as made by Marks *are in many cases in detail refuted by the Master's report.*

Already you may be wondering why I pay so much attention to Profs. Bemis and Marks in connection with my present paper, and especially in connection with their testimony outside the subject of depreciation.

I think that all that I have said is pertinent.

By the way in which the public, the Commissions, even the courts and, particularly, the yellow journals are attacking our industry, we must be prepared to meet these attacks and to meet them squarely with the facts. When the attacks assume definite form, our opponents will be assisted by Profs. Bemis, Marks, or men of their type. It is, therefore, of the utmost importance that we should all be informed as to the methods these men pursue and, especially, it is important that we should be put on our guard not to accept any statements such as those made by Marks in his book without careful analysis of the original records. Especially it is important that those of us who have not had experience in these investigations and attacks should know that there are certain records which may be helpful in meeting the attacks of these "experts."

All of this especially applies to depreciation because of the intricacy of the subject.

Let us for a moment consider the methods of the two "experts" named in connection with the subject of depreciation. Prof. Bemis' method seems to be to quote from some well known gas man's testimony in connection with some particular case and then apply to the case in hand the data so obtained, if such meets his requirements. He has honored me by quoting me in several important cases, and in doing so has first fully qualified me so as to give his data value. For instance, in the Chicago case, he quoted from my Holyoke testimony, made certain corrections which were absolutely unwarranted by my testimony, and then applied the resulting figure to Chicago, irrespective of what differences there might be between the local conditions of Chicago and Holyoke, the difference as to accounting, the difference as to amount spent for repairs and differences as to design and character of construction. In this and other cases he intimates that my testimony was for general application, whereas I have never testified as to any depreciation figures for general application, and in the Holyoke case I repeatedly went out of my way to emphasize the fact that my testimony was applicable only to Holyoke, and was not for general application.

In the Syracuse and Buffalo cases, Bemis worked on my Holyoke life table, prepared 7 or 8 years before, and then applied this table in his own way, irrespective of change of conditions due to locality, date, character of construction, methods of operation, etc. Having established such an average life to meet his present requirements, he then determines the rate per cent. required to produce through a sinking fund $100 at the end of the assumed life, and this per cent. he applies to his *assumed* structural value of the plant under consideration. In other words, he always works on the sinking fund basis and assumes 4 per cent. or 5 per cent. for the rate of interest to be obtained through the whole term of years. Under the present abnarmal conditions of high rates of interest, if he were testifying it would not surprise me if he assumed 6 per cent. as obtainable for a life of 30 or 40 years to come.

It is particularly to be noted that Bemis takes the amount required by the sinking fund scheme as *the actual cost of depreciation.* Of course, such is not the fact. If we have a certain piece of apparatus which we estimate will have to be discarded at the end of 40 years, in spite of the fact that it is to be kept in as good condition as possible during those 40 years, then the annual cost of depreciation over and above the cost of repairs and maintenance is $\frac{1}{40}$ of the original cost, always provided we assumed the apparatus will have no value when discarded. If we estimate that it will have a certain value at the end of the period, then, of course, the annual cost of depreciation will be $\frac{1}{40}$ of the difference between the original cost and the residual value. Others besides Prof. Bemis have fallen into error by failing to distinguish between the cost of depreciation and the financing of this item of loss.

If we decide to meet the loss by a fixed annual payment less than the amount of annual loss, relying upon the interest accumulations on these payments to make up the difference, that does not reduce the actual operating cost of depreciation, but simply provides that the interest on these payments, which otherwise would be applicable to other purposes, is to be devoted to meeting depreciation cost.

This is well exemplified in Prof. Bemis' testimony in the Buffalo case. Bemis testified that, in addition to the amount charged up for repairs and maintenance, he allowed 5 cents per 1,000 to cover depreciation, making 11 cents in all for repairs and depreciation.

When his life table (taken from my Holyoke testimony of years before) was developed in connection with the property appraisal estimate of his associate, Prof. Marks (later to be referred to), he found that, by reason of the absurdly low valuation given by Marks, his life table gave only 3.55 cents per 1,000, instead of the 5 cents which he previously had given as the correct figure. He then endeavored to jus-

tify his 5 cents estimate and make it tie in with the 3.55 cents developed from his life table as follows (page 667): "I can add 40 per cent. to that (the 3.55 cents) before I reach the 5 cents which I allow, which is the same as saying that it will reach 5 cents on giving the plant a value of 40 per cent. greater than Prof. Marks *assumed*, or nearly $1,000,000 greater.

Therefore, there is a margin allowed for error of Prof. Marks' of $1,000,000. This seems to be quite a concession on the part of a sustaining witness, but the fact is, Marks was a good many millions below the truth.

Bemis assumed a 5 per cent. rate of interest for his sinking fund, as he says, "because it is generally considered in the gas business that money put into plant ought to produce 5 per cent. return." This clearly indicates that, although his small charge for depreciation cost is based upon the amount required to be deposited in a sinking fund to accumulate interest, and a 5 per cent. sinking fund at that, he acknowledges that the necessities of the business will require the depreciation fund to be reinvested in the business. Here, then, he overlooks or conceals the fact that, if the depreciation payments are reinvested in plant for extensions, etc., the interest accumulations as covered by the sinking fund scheme must necessarily come out of the earnings of the business, and so it is at once shown that the total loss by depreciation must fall upon the business as a whole. If the depreciation fund is reinvested in the business on the theory that such reinvestment of income will meet the cost of depreciation, then certainly the additional earnings from such reinvested income must be segregated and appropriated absolutely as an offset to depreciation loss—otherwise, the whole scheme falls to the ground. But how can these individial earning be identified, segregated and then combined to meet this demand? An accountant will at once see that the problem is one of great intricacy and anything gained fails to compensate for the trouble and expense of such a complication in our scheme of bookkeeping. It remains then to assume such a rate of return as we feel sure these reinvestments will secure in our business, and then, feeling reasonably sure that the general earnings will include these additional earnings, set apart the required amount against depreciation without attempting to indicate which particular dollar is earned by original investment and which by the items of reinvested income.

If we still desire to follow the sinking fund scheme in connection with such reinvestment of depreciation fund payments, so securing a minimum annual payment *at the first*, we can set up a sinking fund scheme on our books and make the payments accordingly. But even this introduces an unnecessary complication, and there is nothing to warrant such a course except this desire to reduce the amount of original annual payment and, perhaps, the hope that by so doing directors who are naturally anxious to make a return to their stockholders on a halting investment may be more readily induced to care for this depreciation loss, which is more or less elusive and intangible in its character, though, in the long run, very real and insistent in its effect.

In connection with some letters published in "Progressive Age" (March 1 and April 2, 1906), I discussed this part of the depreciation problem and I showed in a table the annual payments which would thus have to be made on the basis of a 40-year life of plant, sinking fund scheme 4 per cent. This table I here reproduce with additional columns showing the annual payments under a 5 per cent. sinking fund scheme, such as Prof. Bemis adopted in the Buffalo case, as above referred to.

Here it is at once seen that while according to the 4 per cent. scheme it requires only $1.05 for each $100 the first year, the 40th payment calls for $4.847 or $3.797 in addition to the $1.05, which $3.797 is the interest accumulation to be met for that year. It also is seen that the principal payments, *which is all that Bemis provides for*, amount only to (40 × 1.05) = $42 at the end of the 40 years, whereas the interest accumulations *to be obtained from the profits* amount in the 40 years to $58.

By the 5 per cent. sinking fund scheme as last advocated by Bemis, the first payment is on $.83 for each $100, while the 40th payment calls for $5.565 or $4.735 in addition to the $.83, which $4.735 is the interest accumulation to be met for that year. It is also to be noted that the principal payments, which is all that Bemis provides for, amount only to (40 × .83 =) $33.20 at the end of the 40 years, leaving $66.80 sinking fund interest to be provided from the additional profits from reinvestment.

The importance of this point must not be lost sight of. If the sinking fund plan is to be followed, then the earnings of the sinking fund payments must be allowed to accumulate for the benefit of the depreciation fund, whether these accumulations come from the banker who borrows the money, the securities in which the fund is invested or the segregated earnings from the reinvestment of the fund in the business.

Result of Company Operating its own Sinking Fund and thus Having to put up Principal and Interest. Forty Years' Life. Yearly Payments for $100 to Include Compound Interest Accumulations as Obtained from Earnings.

Years.	4 per cent. Compounded Annually. Amount annually required to accumulate $100 in a 4 per cent. sinking Fund at end of 40 years is $1.05.		5 per cent. Compounded Annually. Amount annually required to accumulate $1.00 in a 5 per cent. sinking Fund at end of 40 years is $0.83.	
	$1 Compounded at 4 per cent.	Yearly Payments, being 1.05 multiplied by number in preceding column.	$1 Compounded at 5 per cent.	Yearly Payments, being .83 multiplied by number in preceeding column.
1	1.0000	1.0500	1.0000	0.8300
2	1.0400	1.0920	1.0500	0.8715
3	1.0816	1.1357	1.1025	0.9151
4	1.1249	1.1811	1.1576	0.9608
5	1.1699	1.2284	1.2155	1.0089
6	1.2167	1.2775	1.2763	1.0593
7	1.2653	1.3286	1.3401	1.1123
8	1.3159	1.3817	1.4071	1.1679
9	1.3686	1.4370	1.4775	1.2263
10	1.4233	1.4945	1.5513	1.2876
11	1.4802	1.5542	1.6289	1.3520
12	1.5395	1.6165	1.7103	1.4195
13	1.6010	1.6811	1.7959	1.4906
14	1.6651	1.7484	1.8856	1.5650
15	1.7317	1.8183	1.9799	1.6433
16	1.8009	1.8909	2.0789	1.7255
17	1.8730	1.9667	2.1829	1.8118
18	1.9479	2.0453	2.2920	1.9024
19	2.0258	2.1271	2.4066	1.9975
20	2.1068	2.2121	2.5270	2.0974
21	2.1911	2.3007	2.6533	2.2022
22	2.2788	2.3927	2.7860	2.3124
23	2.3699	2.4884	2.9253	2.4280
24	2.4647	2.5879	3.0715	2.5493
25	2.5633	2.6915	3.2251	2.6768
26	2.6658	2.7991	3.3864	2.8107
27	2.7725	2.9111	3.5557	2.9512
28	2.8834	3.0276	3.7335	3.0988
29	2.9987	3.1486	3.9201	3.2537
30	3.1187	3.2746	4.1161	3.4164
31	3.2434	3.4056	4.3219	3.5872
32	3.3731	3.5418	4.5380	3.7665
33	3.5081	3.6835	4.7649	3.9549
34	3.6484	3.8308	5.0032	4.1526
35	3.7943	3.9840	5.2533	4.3602
36	3.9461	4.1434	5.5160	4.5783
37	4.1039	4.3091	5.7918	4.8072
38	4.2681	4.4815	6.0814	5.0476
39	4.4488	4.6607	6.3855	5.3000
40	4.6164	4.8472	6.7048	5.5650
		$99.7769		$100.2637

Then it resolves itself into the question: Shall we pay for our depreciation at a uniform rate, year by year, as it occurs, charging up the full amount, found by dividing the cost by the estimated number of years, or shall we lessen the apparent burden for the first years at the expense of the later years?

If there is some case to be met where a certain amount of money must be forthcoming at a certain time, and to this we are pledged, and we can afford to put the money out of our hands, the sinking fund may well be adopted; but, if we require each year for extensions an amount equal to or greater than the amount required to be set aside to cover depreciation (the latter is almost sure to be the case), then certainly the simpler method and the cheaper is to use this fund for these extensions, letting these additional assets stand against the depreciation of the original assets. In such a case and, in fact, in every case, the yearly depreciation must be computed on the additional assets also.

The sinking fund plan is particularly applicable to municipal undertakings where there are definite requirements by law as to repayment of loans.

We must bear in mind that if we lay aside the depreciation fund to earn interest, then to a like extent we must borrow other moneys in one way or another to meet extensions; so while we are apparently saving on depreciation by reason of the reduced amount required for the depreciation sinking fund, we must pay interest on the like amount borrowed at probably a higher rate of interest for extensions. So, if our books do not show the facts completely, the depreciation charge

will be lowered while the interest charge will be increased, both of which conditions will be embarrassing when we have to meet Prof. Bemis or his followers, who aim to cut down both operating cost and capital return below points practically maintainable.

Coming back to Prof. Bemis' Buffalo testimony, we find (page 669) the following attempted explanation of the failure of his 5 cents per 1,000 allowance to agree with Prof. Marks' appraisal of structural value: "I next observed that 5 cents a 1,000 feet put into a depreciation fund would be about 1 per cent. (it was less than 1 per cent.) on the investment or on the assumed new cost (cost new) as given by Marks, but taking it as 1 per cent. I found that 1 per cent. of the cost of all put into a 5 per cent. sinking fund or *invested in the plant where it brings in 5 per cent.*, will amount in 20 years to 33 per cent.; in other words, a depreciation of 33 per cent. on the present plant to-day as compared with a new plant means that it has had an average life of 20 years only, or, if you take it on a 4 per cent sinking fund basis, it only means 21 years' life. If the plant has had an average life of 21 years, then it has depreciated 33 per cent. on even 5 cents allowance a year."

From what has just been said it will be seen that the 1 per cent. a year would not have accumulated to 33 per cent. in 20 or 21 years *unless the interest accumulations on the 5 per cent. compound interest basis had also been taken out of the earnings against depreciation*, all as shown by the table above.

It must here be explained that Marks had made his appraisal of structural value, by taking present cost (or so claiming) and then taking from the total amount to cover depreciation 33⅓ per cent. without regard to age or condition of several parts, including apparatus just purchased. He was not clear as to whether he meant present replacement cost or original cost. In places he claimed to use present prices and, in one case, aimed to back up his assumed present prices of pipe by quoting from an affidavit of our late engineer, Mr. Herron, made about 8 years previously, Mr. Herron himself having been dead—which Marks did not know—some 2 or 3 years. He also omitted from his schedule parts which he did not find in use, such as the hydraulic drawing machine, which was in the machine shop for repairs.

As a further example, he deliberately and persistently excluded a holder tank in perfect condition, in use as a tar tank, although he went out of his way to praise the ingenuity of the man who had so made it available for effective service in a new line. He seemed to be quite unaware of the fact that this is not an unusual practice in our business.

He included in his general appraisal nothing for working capital, and when this was brought to his attention (the error was probably due to an oversight though he would not so acknowledge) he claimed that he had fixed the working capital in his mind at somewhere between $70,000 and $100,000, and concluded that his structural appraisement was sufficiently ample to cover this item also. So *if* this were the fact, he had included $70,000 to $100,000 for working capital, and then depreciated it 33⅓ per cent. with the other items. This is my first experience with an "expert" who would go so far as to first fix on a *net* amount for working capital and then deduct for depreciation.

Let me give a few other examples of Prof. Marks' appraisal and estimate on depreciation so that it may better be understood what Prof. Bemis had to harmonize his testimony with.

He took 33⅓ per cent. off holder and apparatus foundations, irrespective of whether they were under old or new plant. He testified that he depreciated holders on the score of age, for they were ample in capacity. Under cross-examination it was shown that he depreciated the newer holders at the same rate as the old. Under re-direct examination he testified that he did not depreciate each particular holder 33⅓ per cent., but he "lumped" them and specifically stated that a holder built 5 years ago would not be depreciated as much as one built 40 years ago. When testifying as to the comparatively new Forrest avenue holder he dodged the question of age, absolescence and inadequacy, but stated that the holder had a very large depreciation due to decay, and 33⅓ per cent. would not be too much to give it." He finally admitted that it was too dark to examine the holder, it being incased in a corrugated iron house, but that this housing would necessarily damage the inclosed holder because the house would act as a condenser and keep the holder sheets continually moistened. Thus he built up a 33⅓ per cent. depreciation charge on a holder and foundations in perfect condition (the iron house was depreciated) on a theory that was absolutely contradicted by the facts, and he finally had to confess that he had made no examination of this holder because it was too dark.

On the meters in stock he first took off 50 per cent. for special depreciation, and then the meter item as a whole was depreciated with the other apparatus 33⅓ per cent. Many of these meters were in perfect repair and practically as good as new.

On cross-examination he was questioned on this point as follows: "And if you take a meter and put it in yesterday, to-day you would value it 33⅓ per cent. off? Answer, "Yes." Thus it appears to this expert it makes no difference whether apparatus is new or old or whether it is kept in repair or left to deteriorate. He depreciated the mains 33⅓ per cent., although in the stipulation the city admitted there was no cause for complaint as to service, including pressure. *Hence the mains were not inadequate, and being cast iron pipes they were not obsolete.* And he himself testified that "cast iron pipe, practically, unless in the presence of alkaline or acid earth, takes its coating of rust and then quits and lasts forever, so far as the main is concerned."

"Q. That is in ordinary ground? A. In ordinary good, clean ground. Q. And if there is not something out of the ordinary here, that will be the life of the plant? A. Yes."

On page 612 his testimony shows that he had no reason to think the Buffalo pipe is not laid in "ordinary, good, clean ground."

As a general commentary upon his valuation and his estimate of depreciation, Marks admits that his examination was only partial and (page 414) that his figures were only "rough approximations."

(To be Continued.)

[Concluded from Page 668.]

FIFTEENTH ANNUAL CONVENTION, PACIFIC COAST GAS ASSOCIATION.

Held at Santa Cruz, September 17, 18 and 19, 1907.

Second Day—Wednesday, September 18th—Morning Session.

The meeting was called to order by the President at 10 A.M., who asked that they try to close the session at 1 o'clock, in order that the ladies and as many of the members as conveyances could be found for could take the trip to the "Big Trees" in the afternoon, which visit would not interfere at all with the outing next day to the Cement Works. They were instructed to meet at the Sea Beach Hotel for the ride to the "Trees." The President then introduced Mr. R. P. Valentine, Editor, who narrated the following

EXPERIENCES:

Mr. President and Members of the Pacific Coast Gas Association: According to the time honored custom, the High Priest of the Experience Department herewith makes his "ancient sacrifice," but this time he does so, as the poet puts it, with "an humble and a contrite heart." The offering, he fears, is too slim to propitiate the Gas House Gods, and he appeals for amnesty at the hands of the deities. Oh, grant his prayer! Asphyxiated be those who escaped the knife of the Experience Man! There has ever been a strange similarity between the report of the Experience Department and a prepayment meter, and it is simply this: People are always curious to see the contents, but they hate to insert anything. This similarity is by no means startling, but it suggests a peculiar inconsistency in the character of the gas man, namely, that he is forever trying to induce people to make an insertion in the prepayment meter, but can not be induced to make an insertion himself in the analogous Experience Department Report. To continue the figure of speech, I will say that there have been a few exceptions where the gas man has made an insertion with apparent willingness, and these exceptions we will take up now, first thanking those who have contributed and those who replied to the solicitations for contributions. Experiences with advertising have been but few of late, perhaps owing to the fact that the necessity for advertising has rapidly diminished, owing to the growing popularity of gas. But here is one that will prove of interest:

Cook with Gas.—"This Company was among the first companies to adopt the slogan, 'Cook with Gas,' and we have made it our advertising cry early and often. We advertise in two ways—in the local papers and by giving away suitable novelties. We find that small advertisements in the papers do not attract the attention of the dear public, so we seldom use less than three columns in width and oftentimes four columns, and many reading notices. We are carrying an ad. in each of the three daily papers, which is four columns wide and 8 inches in depth, and we change the copy according to circumstances. The weather has much to do with the change of copy. The Company has found that advertising pays, if it is done right, especially novelty advertising. Through the distribution of novelties and various other channels, our employees are known all over the city (we have now about 35,000 inhabitants) as 'Cook with Gas,' and it is a little embarrassing at times to be guyed by the small boy, 'Here comes' 'Cook with Gas,' when enjoying a stroll with one's best girl. We started the novelty advertising with lead pencils, then followed

with numerous other specialties, among them egg timers, gas stove matches, badges, small looking glasses, iron holders, transfer pictures, toothpicks, thermometers, and lastly, horse blankets. We had a hard time getting the loud, yellow horse blankets distributed. They appeared ever too loud, even to the expressmen and other drivers. The big black letters with the yellow background could be read almost a block distant. We realized that this sort of advertising would bring good results, and at first found it necessary to hire the expressmen at $1 per week to use them, but at the end of 2 weeks the assessment was stopped, as we could not supply the demand. This summer we have 50 different vehicles on the streets, which carry the loud yellow blankets adorned with 'Cook with Gas' in 12-inch letters. Even the city water wagons are so branded. The small badges with 'Cook with Gas' are in demand by the children, and a regular string of youngsters apply at our office daily for them."

Here is another experience of, perhaps, equal interest, but of a different nature:

Leak in Inlet Pipe to Relief Holder.—"Recently a severe leak manifested itself in the inlet pipe to our relief holder, and for quite a while it gave us a merry time. It showed itself in the afternoon after the line had been steamed, and was obviously a very bad one from the fact that we had to put on day and night shifts with a No. 4 Douglass pump in order to keep the water down in the drip-pot and allow the passage of gas. We immediately put a gang of men at work laying a pipe line to another holder, which we were to use as a relief holder, and also began digging down to the drip-pot, 18 feet below the surface. Upon reaching the drip-pot we put into service a steam pump to keep the water below the outlet pipe from the drip-pot, and thus got rid of the men on the hand pump. It had for some time been our intention to replace the then existing pipe lines with larger ones, and this we decided to do at once, in that way finding the leak. Accordingly, we proceeded to pump out the holder. When the water was removed, and we were drilling through a 24-inch wall in the bottom of the brickwork, we found the leak at the bell on the elbow of the riser. The lead was found to be nearly out of the joint and very loose. From the appearance it would not have been long before it had entirely slipped out, and the pipe line would have been flooded and we put out of business."

And now we follow with an experience of very peculiar interest:

There's Many a Slip.—"Here is an experience for which the flood of the Feather river of last March is responsible. After the flood we found ourselves with one gasholder totally destroyed, and another with guide frames gone, besides numerous small leaks and some indentations in the holder itself. The holder was an old one, and we had some misgivings in the matter of straightening out the indentations. We had, however, erected temporary guide frames and had the holder raised up about half-way out of the tub by means of specially made hooks grasping the lower rim of the holder, which was then raised by block and tackle. It was at this point, while we were getting ready to force out the sides of the holder to their proper shape, that one of the blocks holding up the holder gave way, causing the other blocks to do likewise, and the holder dropped back into the water of the tub. The air inside of the holder was naturally compressed with great force, and in a fraction of a second we had the sides of the holder all out to their proper places—doing gently and efficiently what we were preparing to do at a considerable expenditure of time and money."

The experiences of the meter men are often humorous, sometimes ridiculous, but rarely pathetic. We have here one that is pathetic in the extreme:

What Wife Didn't Know.—"During the summer vacation period, a richly dressed woman who lives not far from downtown rustled into the office, and tapping nervously on the counter, seemed to be choking to hand a bunch of conversation to somebody connected with the corporation. She could hardly wait for the young man to wait upon her and poured her story into his ears in Maxim gun style. 'Oh, I've been waiting for a chance to catch you in. How about this?' she demanded, throwing a bill for $3 on the counter. 'Three dollars for gas which we never burned!' That is a very commonplace occurrence, and the clerk argued gently with her, but she was adamant. 'We never, never burned a dollar's worth of gas this month,' she insisted. 'I was away at the seashore. My husband was home all alone—just slept in the house nights, got his meals downtown—and he told me that he had not burned the gas except just long enough to get undressed and go to bed. Those figures are all bosh! You just write them down and charge whatever you want to!' That was where the meter came in for its own. She was assured that that meter would be promptly investigated. The investigation seemed to uphold the meter, according to the inspector's report, but the lady only sniffed suspiciously and declared her original intentions to refuse payment. But it so happened that a gas company employee who heard of the matter had an intimate acquaintance with Harry, the husband, who only burned gas to retire by. As a result an inspector sought him out at his office. And the brazen man grinned at the inspector and said: 'Sure, I'll pay the bill all right, but don't say anything to the wife.' He had little parties every little while during his wife's absence, and things that look like peppermint lozenges had clicked merrily until 3 or 4 o'clock in the morning, while a group about a table talked about 'kitties' and other animals. But the lady in question is still going about among her friends and telling that both she and Harry utterly refused to pay the bill, and the Gas Company stopped sending it."

Red Lead as a Preservative.—"Some time ago the writer was called upon to take charge of a strange plant, and among the improvements which he found it necessary immediately to make was the renewing of 2,300 feet of main, because of severe leakage. The pipe in question was 3-inch, screw tubing, and had been in the ground, report said, for a year and a half. Upon taking it up we found an average of 23 leaks to the length; and in many places the rust had eaten large ulcer-like holes into the pipe. The pipe had plainly been painted with red lead, but this had, to a large extent, been eaten away, or clung to the pipe in loose scale. The soil was of a lime composition, with perhaps some saline matter. As a substitute for the painted pipe we used galvanized iron pipe; but this has not been in the ground long enough to judge of its comparative durability."

The trials of the gas man are many, and it is little wonder that his life often becomes embittered and his disposition spoiled. We have here an instance where even so honorable and reputable an institution as a city police department fails to escape the wrath of the gas monger:

Prepayment Meters Abandoned.—"At a meeting of our Association, some years ago, I gave you an experience that I had had with prepayment gas meters, and strongly advocated the use of same on account of the easy collections from bad pay customers; but I must say that the time has come when I have had occasion to change my mind. Were it so that everyone were honest, I would still be strongly in favor of their use, but in our city, during the last year, we have had over 200 meters robbed. In some cases we suspect the parties living in the houses in which the meters are set, but in most cases they are downright burglaries, houses broken into, here, there and everywhere. Had we adequate police protection it would be different, but, living in a city where the police can only arrest someone who has left a horse untied, has speeded an automobile, or committed some other such petty offense, and where they very seldom arrest a burglar or robber, I have come to the conclusion to discontinue their use, to a great extent."

It takes the gas house superintendent to get around a difficulty. Witness the following:

Quick Repairs.—"One of our water gas, Springer sets burned the lining out of the firebox on New Year's Day. We had no time for ordinary repairs to the generator so it was a question of immediate repairs. After a consultation of a few moments we decided that it must be done without delay. We immediately pulled out the fire and made, of sheet asbestos, doubled, with an air cushion between, a protection from the heat above. We then placed electric fans at the ash doors and, with a relay of masons, replaced the lining, covering an area of about 10 square feet. In spite of the tremendous heat and the confined limit in which we were able to work, we started the fire in this machine at 1:30 A.M., Junuary 3d, and in this manner were making gas again on the morning of the 4th. We had no further trouble with this machine, and the hurry-up patch is still in good condition."

We have another experience that may be of value, directly or indirectly, where a high pressure system is in use:

High Pressure Expediency.—"The use of high pressure tanks for distributing purposes offers a large field for expediency—a fact that was brought home to the writer some time ago with a great deal of profitableness. A certain plant used 3 compression tanks from which the mains were supplied at a pressure of 15 pounds. The tanks themselves were maintained at a pressure of 60 pounds each, that is, so far as this could be done by keeping an eye always on the gauges, and

manipulating, as occasion demanded, the throttle on the steam end of the compressor. It occurred to the writer that the economics of such a system was open to considerable improvement and changes were made along the following lines: First, the piping was so altered as to allow for the use of two of the tanks for storage and one for distributing purposes. The pressure to be maintained in the two storage tanks was made 80 instead of 60 pounds and that in the distributing tank set at 15 pounds. The arrangement necessitated, of course, the recharging of the storage tanks, after discharging the gas during each peak load. But the economy of the arrangement lies in the fact that a constant pressure of but 15 pounds was required for distributing, instead of 60 as formerly. In addition, we found that the former pressure of 15 pounds under which gas had been distributed was more than adequate, and we consequently reduced the pressure in the mains to a maximum of 7 pounds, without reducing the efficiency. To perfect the system we had yet to make automatic the manipulation of the compressor, in adjusting its speed to the constant pressure of 15 pounds required in the distributing tank. To do this we installed a combination speed and pressure governor, by which the pressure of the tank controlled the throttle of the engine. The change described worked to perfection, and the result—namely, a saving of 45 per cent. in fuel—was most gratifying. All of which goes to prove what I said above, that there is great opportunity for the use of expediency in operating a high pressure distributing system."

Where the Busy Bee Causes the Gas Man to Get Busy.—"One section of our distributing system is operated under high pressure, a feature of which is the installation of No. 1 equitable regulators for individual residence consumers, all regulators having a ¾-inch vent pipe run to a point of safety outside of the building, regulators of a larger capacity being used wherever required. This system has been in operation for about 1½ years, giving the best of satisfaction both to the consumers and the Company; complaints of poor sesvice being few and far between, and we had many times congratulated ourselves upon the wisdom and foresight that prompted this method of handling gas. We did, however, meet with one most peculiar experience, and one that for a short time bothered us somewhat. Complaint had been made that some of our consumers were getting a very meager supply of gas, and in such cases our inspector ordered the regulator changed. This was done, and after testing, no better results were obtained. It was plainly demonstrated that the gas in sufficient quantity was delivered to the regulator, that the regulator, meter and house piping were in perfect condition, and apparently there was no good reason why we could deliver no gas at the stove. During the course of investigation the vent pipe was removed and the result was a good supply of gas at the appliance. Upon examining the vent pipe a bees' nest was found contained therein that stopped it so completely as to prevent the working of the diaphragm on the regulator. I may add that the bees were of a miniature type, and that the few troubles of this nature were confined to a very small locality."

The next experience shows how it was proven that a mixture of crude oil and water does not make a healthy drink.

A Leaky Oil Tank.—"The writer has charge of a gas and electric plant in a city of about 3,500 inhabitants. The plant is located near the business center of the town, on the main street, two blocks from the post office, and is adjacent to city property, upon which are located four of the wells supplying the city water. Previous to our advent the old gas works had been entirely renovated and a new system installed. While making this change quite a quantity of tar and other refuse products had been dumped into a trench near the city wells above mentioned. About the year 1903, in order to better our facilities for handling oil, a redwood tank was installed and placed about 1 foot under ground, at a point not over 30 feet from the wells. This tank held about 11,000 gallons of oil. The earth covering the top of the tank was kept moist to prevent any shrinkage. As the time passed, we began to notice a gradual loss of oil, and at last, receiving a car of high gravity oil, our loss per day ran up to over 100 gallons. This loss convinced us that something was wrong with our oil tank. On digging a trench around the tank we found the iron hoops so loose that one could run his hand between them and the staves. The staves instead of running straight were curved in the center and oil was oozing out of every crack, showing that the redwood had shrunken under the effects of crude oil. We overcame this trouble by having a galvanized tank made and placed inside the wooden one, and from that time forward we noticed no loss of oil. In the meantime, the water consumers began to complain of oil in the water. Of course we laid it to the oil paint used by the water works in painting the inside of the city water tanks. The complaints, however, came in so thick and fast that the City Board of Health took the matter up, and we at last had to acknowledge that it was no doubt our oil or tar in the water. It was clearly shown that the city wells were not properly constructed, being provided with only a single casing, and there were old-timers who volunteered the information that the casings of the wells had been punctured by the water company, in order to let in a surplus of water to increase the supply. The presence of oil, therefore, was a clear proof of the presence of surface water. The Secretary ef the State Board of Health, upon investigating the oil trouble, remarked that he considered it a blessing that the oil reached the city wells, if only to prove that the surface water was contaminating them. Then the City Board of Trustees devised a scheme of stopping the inflow of surface water containing the oil; they decided to take out the suction pipes, and, after putting a flange around the bottom of each pipe, large enough to fit the casing, they replaced the suction pipes and filled the spaces between the pipes and casings with liquid cement. The first two wells thus treated proved a success, giving a supply of clear water with no trace of oil after the well had been once pumped out; the other two wells so repaired proved a failure, for, after repeated trials, oil and tar continued to appear in the water, and so numerous were the complaints that the City Board of Health condemned the wells and they had to be abandoned. About that time a new Board of Trustees, with a record to make, peremptorily demanded that the Gas and Electric Company bore a new well of larger dimensions to replace the old wells contaminated by our oil and tar. We gracefully submitted, feeling just like one of the old martyrs suffering in a glorious cause."

And finally we have something almost humorous, which we may entitle—

Woman's Intuition.—"A woman sent for an inspector, who arrived in due time and started toward the offending meter; but the woman informed him that all she wanted was an opportunity of telling him just exactly what she thought of him. 'I appreciate that my next door neighbor may be a very attractive woman in your eyes,' she told him scathingly, 'but that is no reason why I should have to pay for her gas, just because you're stuck on her. Oh, I know,' she continued, 'I know that you have connected her house with my meter, and that I am paying for most of her gas. My bill is always about double her's, but I'm just giving you fair warning! That pretty face of her's is likely to get you into trouble, young man.'"

Engine Room Dust of Gas Works.

[Prepared for the JOURNAL, by "R."]

There is always considerable dust in the atmosphere of the gas works, that can be detected in the engine rooms, furnace rooms and other general departments of gas manufacturing plants, and its removal has caused much serious study. An examination of samples of the laden air of gas plants in which machinery is used reveals a composition like that exhibited in Fig. 1. The oily matters accrue from the greases utilized for the lubrication of the boxes in the machinery and shafting, for as there is usually some mechanical work in progress, in which filings and grittings of metallic substances are created, these metal particles find their way into the body of the air of the room. Metal dust filings are common. Then there are the metal particles which emerge daily from meshing gearings, frictional contacting surfaces of metal bushings, etc. Acids accrue from general chemicals in the air that prevail in all workrooms. Again, there are found the silica, found by chemical analysis in all dust laden atmospheres, and the general organic matter as well. The latter includes almost everything—bone, bits of earthy matters, etc., are traceable in the magnified specimens of the organic section of the dust. Coal dust, of course, exists in liberal proportions in the atmosphere of all gas works. Now then, some manufacturers adopt devices for the effectual or non-effectual removal of the dust laden air.

In looking about at different gas manufacturing plants I observed some odd patterns of ventilating schemes. For example, in one small country gas works, where the superintendent wanted to make the air pleasanter in the fire and engine rooms, a set of crude bellows was erected according to the plan exhibited in Fig. 2. A platform was built and on this a pair of old-fashioned blacksmith bellows was secured. Then a cord was extended from the lever lift *A*, over the wheels *B* and *C*, and carried down to the windlass device at *D*. Here a lad had to remain and wind up on the crank of the reel in order to take up on the cord. A turn and one-half of the reel was enough.

With the rising of the lever of the bellows from this action, the air was sucked into the bellows body through a pipe leading in from the exterior atmosphere. Thus new air would be received into the bellows. Upon releasing the strain on the reel cord the weight of the sand in the sand box on top of the bellows body would depress the bellows and cause the new air therein to shoot outward, through the pipe *E*, into the room. This force of air would create a circulation. The old air in the room was forced out; but that crude sort of construction has been improved upon by gas engineers. The hand bellows are too troublesome to operate; yet, the worm style of air-moving contrivance shown in Fig. 3, is not much better. Nevertheless, I observed that the worms are in use in some places. The worm is constructed almost entirely of sheet tin, soldered into a cylinder or drum with the wings as shown. The object is to make this affair revolve speedily within a casement of tin pipe, thereby giving motion to the air inside by the action of the propeller shaped blade extending like a worm about the central shaft from end to end. While the current of air is moved with this device the device is by no means a success, for it is too slow. The revolving cylinder rests in end bearings. A belt and wheel are attached to give the required motion to the drum. The pipe leads through the apartment of the gas works, sucking in air at

Fig 1

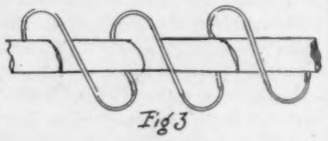


Fig 3

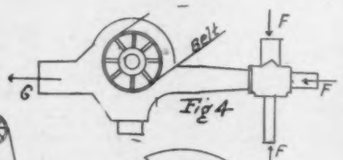


Fig 4

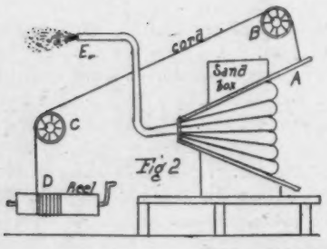


Fig 2

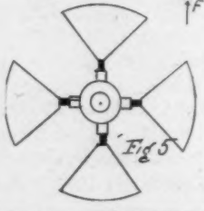
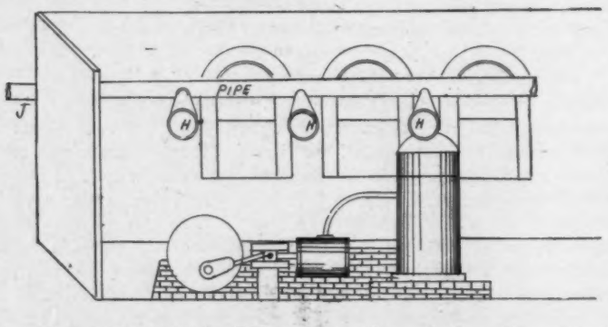


Fig 5



one end and driving it forth into space through the other end; the vacuum thus generated in the apartment is filled by new air entering.

There is the fanwheel proposition, which is more reliable, and is used quite extensively in gas works, engine and boiler rooms, and other places where it is necessary to purify the dust-laden air of apartments. The fanwheel is boxed as a rule, and the casement is attached upon the wall of the apartment, inside or outside, where the affair can be driven to the best advantage by the power at hand. Usually the power is taken from a countershaft to the driving pulley on the case of the fanwheel, and the pipes of the outfit are extended directly into the compartments where purification is wanted. Branch lines may reach out like *F*, *F*, *F*, Fig. 4. The air being drawn into the pipes, it is passed onward by the fanwheel and sent out through the outlet at *G*. The latter is fixed on the outside of the wall where the nozzle can feed into space.

Fans of various patterns are used. The common, 4-bladed wheel is shown in Fig. 5. I saw some 2-bladed wheels, likewise 3, 5 and 6-bladed wheels. The 4-bladed wheel is popular. Sometimes the ends of the blades are rounded as shown, and again we find them cut square. I noticed that many of the ventilating fans were operating under difficulties. At one gas making plant the ventilating fan outfit was tediously struggling along with a tight and hot bearing. In another, the flabbing belt indicated that the driving wheel of the fan was slipping. In another a hissing sound at every turn of the wheel plainly told of a bad leak in the casement of the machine.

I observed quite an ingenious rigging at one place, illustrated in the last cut. A pipe was inserted in the wall of the engine room, where a small, special gas engine was used for certain service, as shown at *J*. This pipe was connected with the suction engine of the fan outfit, and it reached along the interior of the apartment. At intervals of 5 feet receivers were set into the pipe joints, as marked *H*, *H*, *H*.

These receivers very readily took in the air of the room where the proper vacuum was made in the rear piping; hence at every stroke of the fanwheel the dust-laden air of the room was pumped into the receivers and passed onward to the outlet on the outside of the building. The void thus created in the room would quickly fill with fresh air entering through the pipes inserted for the purpose. A great deal of experimenting along this line of work has been in vogue at gas manufacturing plants in recent years, not only for the purpose of installing air purifying devices, but for the more general adoption of such devices in apartments where gas engines are used, or wherever it becomes necessary to drive out dust laden or foul smelling air, to make room for pure air.

Radiator Brush.

The Osborn Manufacturing Company, which concern is very prominent for its output of brooms, brushes, foundry supplies and the like, is placing on the market the radiator brush herewith illustrated. It

will be found useful in a way in the engine room, but more particularly in the Superintendent's office, and the business headquarters of the Company. It comes in two lengths, 26 and 36 inches over all. The brush part is flat, about 1 inch thick, 3½ inches wide and 6 inches long, and has a twisted wire stem and enameled handle. The bristles are twisted right into the wire stem, thus giving it four brushing sides. It is claimed that the brush reaches every part between the sections of a radiator.

ITEMS OF INTEREST FROM VARIOUS LOCALITIES.

Mr. James H. Walker, of Milwaukee, Wis., has been retained by the Ottawa (Can.) Gas Company to put practically before the people of that city the benefits of gas used as a cooking and heating agent. This stay of his there will be devoted chiefly to such uses of gas on the larger scale as those concerned with cooking operations in hotels, restaurants, clubs and public institutions. He will also address himself to the uses of gas for jewelry making, melting of metals, etc.

At the annual meetings of the Mansfield (O.) Gas Company and the Mansfield Electric Light and Power Companies the officers chosen were: Directors, gas division: C. W. Upson, Josiah S. Hedges, J. E. Upson, W. C. Hedges, M. M. Weaver, J. P. Seward and Jos. J. Hedges; electric division, Directors: C. W. Upson, J. S. Hedges, J. E. Upson, W. C. Hedges, M. B. Bushnell, E. H. Heiser and C. N. Gaumer. Executive management, both Companies: President, C.W. Upson; Vice-President, Josiah S. Hedges; Treasurer, J. E. Upson; Secretary and Superintendent, W. C. Hedges.

We are indebted to a correspondent for this brief mention of the life's history of Durand Woodman, Ph.D., who was well known to the gas men of the United States – the fact of his death was briefly noted in the Journal published the week after his death:

"Durand Woodman, Ph.D., the well known analytic and consulting chemist, died at his home in Fanwood, N. J., the 4th ult., at the age of 48. He was born in New York city and was a graduate of Stevens Institute of Technology, Hoboken, N. J., with and in the Class of 1880. Later he completed his studies in the University of Berlin and in the Analytical Laboratory of Fresenius, Wiesbaden, Germany. From 1883 to 1886 he was chemist to the United States Electric Light Company, and the work done by him for that corporation attracted the attention of the electrical world. In 1891 he established a laboratory at 80 Beaver street, New York, where he remained actively and successfully in business until disease set its undermining mark upon him. Dr. Woodman was a member of the American Chemical Society; of the Society of Chemical Industry, London; of the Deutcher Chemische Gesellschaft, Berlin; the Verein Deutcher Chemiker, the Chemists' Club, the Stevens Alumni, and the West Side Republican Club. He had also served as Chemical Examiner of Supplies for the U. S. Lighthouse Division, Third District. He was a man of scholarly attainments and his personality was of the sort

which will cause those who knew him well to long cherish his memory."

MR. J. ALEX. MAYERS informs us that in addition to the water gas set of the Gas Machinery Company's type, which that Company erected for the Atlantic City (N. J.) Gas Company this summer (the set has been in operation since the last week in August), the contract for a second set was sent the same way some days ago. The new set will be up to the making of 750,000 cubic feet each 24 hours. These sets, and the other apparatus which the Gas Machinery Company is installing for the Atlantic City folks—the apparatus includes purifying boxes, tar extractor, condensers, etc.—will put them in happy possession of an up-to-date gas plant.

"L.," WRITING under date of the 12th inst., incloses the following from Harrisburg, Pa.: "Governor Stuart has approved the charter application of the Marietta and Elizabeth Gas Company, which is to operate in those two boroughs and in Mount Joy, Coney and Donegal townships of Lancaster county, with an office in Elizabethtown, all of Pennsylvania. H. P. Smith and Paule Heine, of Lancaster, and C. E. Pugh, of Lititz, are interested."

PECATONICA, ILLS., is ripe for a gas works, and it looks that certain capitalists of Rockford, Ills., are getting ready to build one there. We were requested not to mention names.

ADVICES by way of Waycross, Ga., under date of the 12th inst., are to this effect: "The Waycross Gas and Construction Company has petitioned for a charter, the capital stock being $100,000, with the privilege of increasing it to any sum not exceeding $500,000. The petitioners are Harley Pettibone, of New York; Burdett Loomis, of Hartford, Conn.; George W. Dean, of Waycross, and F. H. Elmore, of Jacksonville, Fla. These propose to construct and operate in Waycross a gas plant for manufactured or natural gas, a plant for the distillation of wood for the purpose of obtaining rosin, turpentine and other products, and to manufacture creosote paving blocks, ties and other woods."

THE Edison Gas and Electric Company, of Redlands, Cal., says the *Citrograph*, has raised its gas rate from 75 cents to $1 per 1,00 cubic feet, and "this," the *Citrograph* adds, "is said by the Company to be because of the raise in price of gas making material; but the real reason is because the Company has found out that it made a mistake in ever lowering the price to 75 cents." To which we add, likely both causes led to the named effect.

MR. R. M. GROSVENOR, writing under date of the 11th inst., incloses the following, which really means more on its face than is shown in the reading to the gas industry of the State of New York: "Judge Hazel has decided that the Buffalo Gas Company may charge $1 per 1,000 cubic feet for gas, and it may issue its bills at the old rate and the excess 5 cents is to be impounded until the case is settled. The opinion was filed some days ago and overrules the city's demurrer that the court has no jurisdiction. June 30 last the Commissioners of Gas and Electricity, appointed upon complaint of Mayor Adam, made order that on and after the 1st day of September the maximum price which should be charged to consumers by the Gas Company be fixed at 95 cents per 1,000 feet, a reductian of 5 cents. The Buffalo Gas Company entered a bill of complaint, stating that such action was contrary to the Federal Constitution and would not admit of a reasonable profit. The Company sought an injunction to restrain the city from enforcing the order and made a motion for an order permitting the Company to collect from customers the price charged prior to September 1, the difference to be impounded to await the result of the action. The city thereupon filed a demurrer on the ground that as the injunction did not affect the city itself, the court has no jurisdiction. Judge Hazel in his opinion overruling the demurrer, says that in absence of a special contract the city is no different than any other consumer and that, therefore, the court has jurisdiction. The relief sought is simply preventative to preserve the rights of both parties until the difference is adjusted. An order may be drawn restraining the city from enforcing the order of the Commissioners. The Company is given the right to issue its bills at $1 per 1,000 feet of gas. The excess over the lower rate is to be impounded until the case is settled. The terms thereof may be agreed upon by counsel, and if no agreement be reached they will be settled by the court."

THE Nevada (Mo.) gas plant improvements are about completed, and they assure a plentiful supply this winter to the residents as well as a degree of comfort to the Superintendent that he did not feel last year.

THE Williamstown (N. J.) Gas Company is sure to be a go. Complete organization was effected early this month, and the following gentlemen were named to manage it: President, H. K. Bugbee; Vice-President, Wm. C. McIlvaine: Secretary, Dunlevy Laughlin; Treasurer, H. S. Ireland.

SECRETARY HOVEY, of the Marshalltown (Ia.) Light, Power and Railway Company, is arranging for extensive betterments to that plant. It is thought the expenditure necessary will amount to $20,000.

THROUGH the operation of the profit sharing plan put in force by the New Haven (Conn.) Gas Light Company the first of the year, 75 shares of the Company's stock now stands on the books in the names of employees.

A CORRESPONDENT in Negaunee, Mich., writing under date of the 10th inst., inclosed the following: "Chiefly through the efforts of two capable solicitors the Marquette County Gas and Electric Company has increased its gas business over 50 per cent. in Negaunee and Ishpeming during the past few months. More than 300 new customers have been added and nearly 200 of this number have connected their homes for gas stoves. The Company has disposed of over 125 stoves of different costs and sizes. The service is giving such good satisfaction that there is every reason to expect a further increase in the business. Many of the new patrons of the Company have demonstrated that gas is a reasonably cheap fuel for the kitchen, and a large number of customers have been secured through the recommendations of neighbors and friends who had already used the gas for cooking. The increase in the business has been larger than the management of the Company expected, though a strong effort was made during the summer to properly place the merits of gas before the people."

HERE is a narrative that rather goes to show that Mr. W. H. Snow is making a pretty good Municipal Manager just as he made a good everyday Manager when in charge of works managed by everyday capital: "According to the monthly reports of the gas and electric department since the beginning of the fiscal year the sale of gas for the present year will exceed the output of any previous year since the city took control of the gas works and perhaps in the history of the city. Last year's figures were large, but the figures up to October 1 are phenomenal. The per cent. increase of the months of this year over last year are as follows: January, 12.3; February, 15.2; March, 14.4; April, 16.4; May, 23.3; June, 21.6; July, 26; August, 29.1; September, 24.5. An increase in the output of 1 month over the same month of the past year is good, but an increase of 20 per cent. or over is phenomenal in the East. The winter months are, of course, the banner ones for stiff increases, but all months seem alike to Manager Snow and his men. For instance, last December the total quantity of gas sold was 15,400,000 cubic feet, yet last August the output was 13,618,000 cubic feet. Manager Snow attributes the cause of the increase in the output to two things: the reasonable price of the commodity and the fact that with nearly every meter installed is accompanied a gas stove. Another important factor in the increase is the fact that the modern blocks and structures of to-day are equipped with piping for gas, and other landlords of older buildings in order to keep abreast of the times and retain their tenents, have been obliged to pipe their blocks. There are but few blocks in Holyoke to-day that are not equipped with gas fixtures, while a few years ago but few of them contained gas fixtures. Landlords of local buildings state to-day, however, that it is almost impossible to rent a tenement or apartment unless the same is supplied with gas, this being the first accommodation a family will look for."

THERE promises to be quite a contest as to whether or not the people interested in the proposed franchise for the Queens Lighting Company, of Long Island, will succeed in getting the necessary permission. Meantime, while the squabble is on it is a certainty that, if the Brooklyn Union Company will not go east from Jamaica—it is only 3 miles away—or if the Freeport or McDonald combination will not come west from Hempstead, the Belmont race track proprietors will construct a works at Queens, on their own property, that will likely eventually do a thriving business in and around Hollis, Franklin Square and Munson, all of which settlements are about ripe for a gas supply forthwith. Nor is it stretching a point to say right here that within a decade the population in the three settlements named will easily take up 500,000 cubic feet of gas each 24 hours.

THE AMERICAN GAS LIGHT JOURNAL

A. M. CALLENDER & CO.,
PROPRIETORS.

THOS. J. CUNNINGHAM,
ELBERT P. CALLENDER,
EDITORS.

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NOTIFICATION RESPECTING ADVERTISING.

Orders for new advertising, or for changes in standing advertisements, to insure attention in the issue following their reception, must be in hand any time of Wednesday.

AGENTS:

New York—American News Co., 39 and 41 Chambers St.
Germany—Lemcke & Buechner, of New York.
England—Aug. Siegle, 30 Lime Street, London.

MONDAY, OCTOBER 21, 1907.

The Market for Gas Securities.

Consolidated gas made a new low record this week. It sold down to 84.

Massachusetts gas, common, shows a loss of 4 per cent., and the preferred 2 per cent.

New Amsterdam gas 5's are lower, in sympathy with Consolidated gas, and are a purchase at prevailing quotations.

Brooklyn Union declined about 10 points from last week's prices.

It is the opinion that stocks may sell still lower.

Gas Stocks.

Quotations by George W. Cleese, Broker and Dealer in Gas Stocks.

16 WALL STREET, NEW YORK CITY.

OCTOBER 21.

☞ All communications will receive particular attention.

☞ The following quotations are based on the par value of $100 per share.

N. Y. City Companies.	*Capital.*	*Par.*	*Bid.*	*Asked.*
Consolidated	$73,177,000	100	84	84⅛
Central Union Gas Co.—				
1st 5's, due 1972, J. & J.	3,000,000	1,000	92	97
Equitable Gas Light Co.—				
Con 5's, due 1931, M. & S.	1,000,000	1,000	..	103
Mutual	3,500,000	100	..	170
New Amsterdam Gas Co.—				
1st Con. 5's, due 1948, J. & J.	11,000,000	1,000	80	84
New York & Richmond Gas Co. (Staten Island)	1,500,000	100	37	43
1st Mtg. Gold Bds. 5 p.ct.	1,000,000	..	98	104
Northern Union—				
1st 5's, due 1927, J. & J.	1,250,000	1,000	90	98
New York and East River—				
1st 5's, due 1944, J. & J.	3,500,000	1,000	100	105
Con. 5's, due 1945, J. & J.	1,500,000	..	97	101
Standard	5,000,000	100	70	100
Preferred	5,000,000	100	100	120
1st Mtg. 5's, due 1930, M. & N	1,500,000	1,000	100	105
The Brooklyn Union	15,000,000	1,000	85	100
1st Con. 5's, due 1948, M. & N	15,000,000	..	..	102
Yonkers	999,650	500	130	..
Out-of-Town Companies.				
Bay State	50,000,000	50	¼	⅝
" Income Bonds	2,000,000	1,000	..	75
Binghamton Gas Works	450,000	100	..	65
" 1st Mtg. 5's	500,000	1,000	95	100
Boston United Gas Co.—				
1st Series S. F. Trust	7,000,000	1,000	82	85
2d " "	3,000,000	1,000	47¼	50
Buffalo City Gas Co.	5,500,000	100	5	8
" " Bonds, 5's	5,250,000	1,000	62	66
Capital, Sacramento	500,000	50	..	35
Bonds (6's)	150,000	1,000	..	..
Chicago Gas Co. Guaranteed Gold Bonds	7,550,000	1,000	104	106¾
Cincinnati Gas and Electric Co.	20,500,000	100	98	98½
Columbus (O.) Gas Co., 1st Mortgage Bonds	1,500,000	1,000	92	98
Columbus (O.) Gas Lt. & Heating Co	1,682,750	100	87	88
Preferred	3,036,500	100	101	103
Consumers, Toronto	2,000,000	50	200	204
Consolidated, Baltimore	11,000,000	100	..	90
Mortgage, 6's	3,600,000	..	..	118
Chesapeake, 1st 6's	1,000,000	..	..	..
Equitable, 1st 6's	910,000	..	..	..
Consolidated, 1st 5's	1,490 000	..	..	112
Consolidated Gas Co. of N. J.	1,000,000	100	15	17
Con. Mtg. 5's	880,000	1,000	92	95
Bonds	75,000	..	..	100
Detroit City Gas Co.	5,000,000	50	..	50
" Prior Lien 5's	4,618,000	1,000	..	98
Detroit Gas Co., 5's	281,000	1,000	75	80
" Inc. 5's	16,000	100	98½	100
Equitable Gas & Fuel Co., Chicago, Bonds	2,000,000	1,000	..	101
Essex and Hudson Gas Co.	6,500,000	..	39	40
Fort Wayne	2,000,000	..	..	..
" Bonds	2,000,000	..	55	..
Grand Rapids Gas Lt. Co. 1st Mtg. 5's	1,225,000	1,000	104½	105
Hartford	750,000	25	190	200
Hudson County Gas Co., of New Jersey	10,500,000	..	100	105
Bonds, 5's	10,500,000	..	101	102½
Indianapolis	3,000,000	..	60	70
" Bonds, 5's	2,650,000	..	104½	105
Jackson Gas Co.	250,000	50	82	..
" 1st Mtg. 5's	200,000	1,000	97	100
Kansas City Gas Light Co., of Missouri	5,000,000	100	..	36
Bonds, 1st 5's	3,822,000	1,000	102	104
Laclede, St. Louis	10,000,000	100	..	105
Preferred	2,500,000	100	95	110
Bonds	10,000,000	1,000	104	104¼
Lafayette Gas Co., Ind.	1,000,000	100	..	60
Bonds	1,000,000	1,000	60	65
Louisville	1,670,000	50	143	145
Madison Gas & Elec. Co.				
" 1st Mtg. 6's	350,000	1,000	106	108¾
" 6 per cent. scrip, due 1910	100,000	25	60	60½
Massachusetts Gas Companies of Boston	25,000,000	100	46¾	47⅛
Preferred	25,000,000	100	79	80
Montreal, Canada	2,000,000	100	218	218¾
Nashville Gas Lt. Co.	1,000,000	100	110	.
Newark, N. J., Con. Gas Co.	6,000,000	..	56	58
Bonds, 6's	6,000,000	..	137	138
New Haven	2,000,000	25	200	..
Peoples G. L. & Coke Co., Chicago	25,000,000	100	80	80¾
1st Mortgage	30,100,000	1,000	..	..
2d "	2,500,000	1,000	104	..
Rochester Gas & Elec. Co.	2,150,000	50	88	..
Preferred	2,150,000	50	118	..
Consolidated 5's	2,000,000	..	104½	105½
San Francisco, Cal.	15,800,000	00	..	..
St. Joseph Gas Co. 1st Mtg. 5's	751,000	1,000	92	..
St. Paul Gas Light Co	1,500,000	100	45	47
1st Mortgage 6's	650,000	1,000	113	116
Extension, 6's	600,000	1,000	112½	115
General Mortgage, 5's	2,465,000	1,000	96¼	..
Syracuse, N. Y.	1,975,000	100	50	55
Bonds	2,047 000	1,000	102	..
Washington, D. C	2,500,000	20	395	400
First mortgage 5's	600,000	..	..	..
Western, Milwaukee	4,000,000	..	..	..
Wilmington, Del.	600,000	50	220	..

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Estimates furnished for the erection of complete gas works or the extension and modernizing of old works. All work warranted. Both water gas and coal gas.

EMPIRE GAS IMPROVEMENT & CONSTRUCTION COMPANY,
1638-tf 49 Wall Street, New York.

WANTED.
Position as Cashier and Accountant,
By a lady thoroughly familiar with water, gas and electric accounts.
Address, - - - - - - "BOX 143,"
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Position Wanted
By married man, 36 years of age. Wishes to better his present position, competent to take charge of coal gas plant, 12 years' experience in all branches of the business, strictly sober, a hustler and can show results. At present employed. Clear record.
1686-4 Address, "HUSTLER," care this Journal.

WANTED,
By young married man of 30, now employed, a position with gas company as manager of distribution and new business department. Twelve years' practical and successful experience in these lines.
1687-3 Address, "Box 141," care this Journal

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A successful gas and electric manager and engineer is open for a position in a city of not less than 25,000. All correspondence confidential. Can furnish best of references.
1689-4 Address, "PRACTICAL," care this Journal.

WANTED.
A Good Distribution Superintendent.
Splendid opportunity for right man. Address, with references and stating experience and salary expected, J. M. ROBB,
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WANTED, FOR WESTERN TERRITORY,
A Traveling Salesman for a Leading Line of Gas Stoves and Ranges already Established.
Must be thoroughly competent, of extended experience and good, established connections among gas companies. A permanent and good paying position to the right man. Address, giving age, experience and references,
"C. S. M.,"
1689-tf Care this Journal.

GAS BOOKS WANTED.
My library of gas books and subjects akin thereto, and which I believe was the most complete in existence, was destroyed in the April 18, 1906, San Francisco disaster. In re-establishing this library, which will find an ultimate home with a gas association or educational institution, I am desirous of securing all available gas literature printed in the English language, including technical works, reports, pamphlets, etc., and will purchase such as I do not yet possess. Those having such works will accommodate me by sending a description thereof, stating condition of volume and net price desired, carriage included. L. P. LOWE,
1681-2m 1214 Polk St., San Francisco, Cal., U. S. A.

MANAGER WANTED
For a gas company in a rapidly growing town with 75,000 population, in New York State. In replying, state age, experience, and salary expected. Address, "BOX 142,"
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WANTED.
A practical gas man would like to purchase an interest in small gas undertaking where skillful, aggressive management would produce results. Pacific Slope preferred. Best of references given. Address, "GENERATOR,"
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FOR SALE,
One 48-Inch Station Meter Complete.
It has not been connected since rebuilt 9 months ago by Helme & McIlhenny, Philadelphia, Pa. We refer you to them.
STANDARD GAS AND ELECTRIC CO.,
1686-tf RALEIGH, N. C.

300 PREPAYMENT METERS FOR SALE.
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what size of pipe to use to convey any quantity of gas, any distance, with any loss of pressure and any initial or final pressure? Then use
Cox's Gas Flow Computer,
as it gives this information accurately at sight, without mental effort. No calculations needed. Saves time, money and mistakes.
Price, 6.5 x 8 inches, in cloth case, $2.50.
For sale by
A. M. Callender & Co., 42 Pine St., N. Y.

ELECTRIC GAS LIGHTING.
How to install electric gas igniting apparatus, including the jump spark and multiple systems for use in houses, churches, theaters, halls, schools, stores or any large building. Also, the care and selection of suitable batteries, wiring and repairs.
By H. S. NORRIE.
Price, 50 cents. Orders may be sent to
A. M. CALLENDER & CO., 42 PINE ST., N. Y. CITY.

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TWO MODERN PLANTS SERVING THREE TOWNS OF 35,000 POPULATION AND LOCATED IN THE EASTERN STATES
FOR PARTICULARS, ADDRESS
"OWNERS,"
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GAS AND ELECTRIC PROPERTIES BOUGHT AND SOLD.
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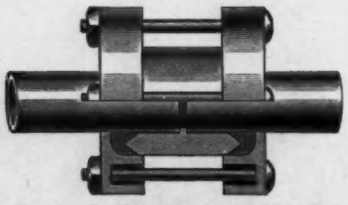
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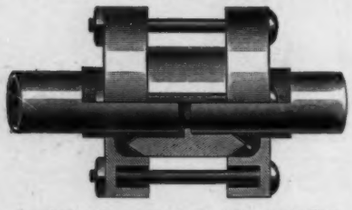
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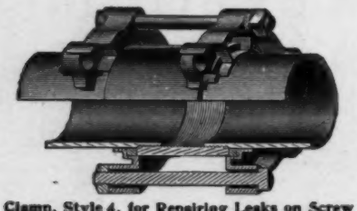
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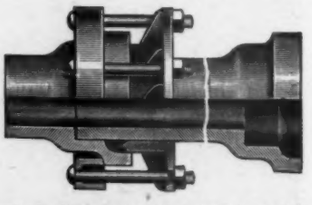
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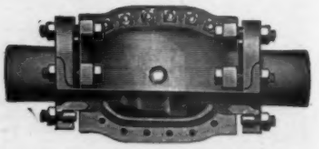
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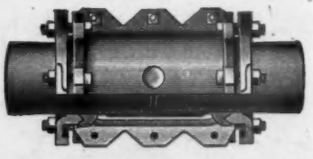
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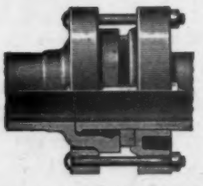
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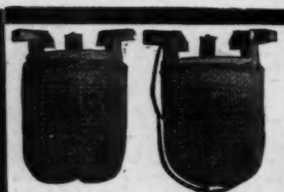
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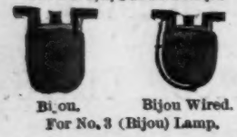
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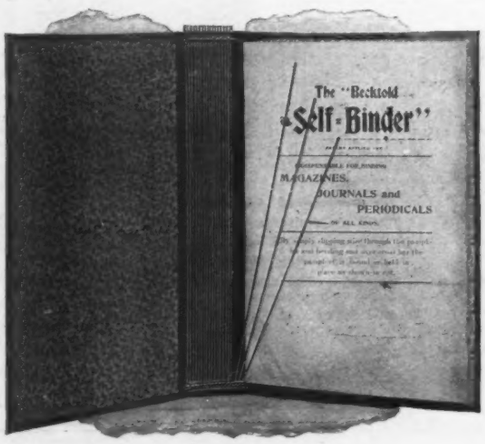

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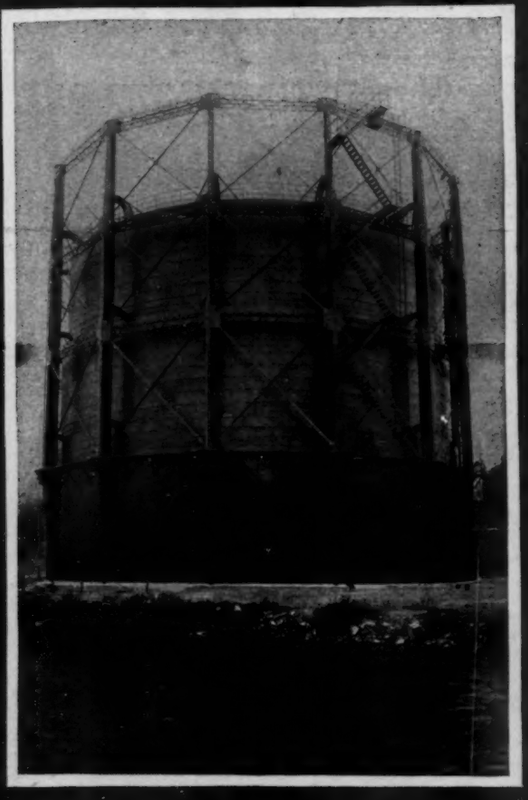

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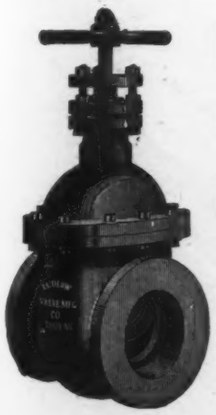

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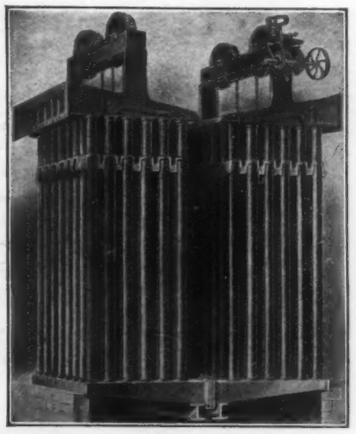

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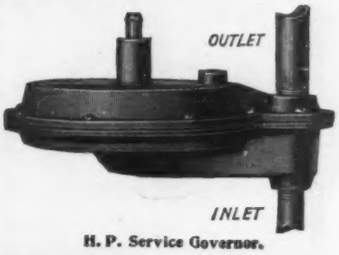

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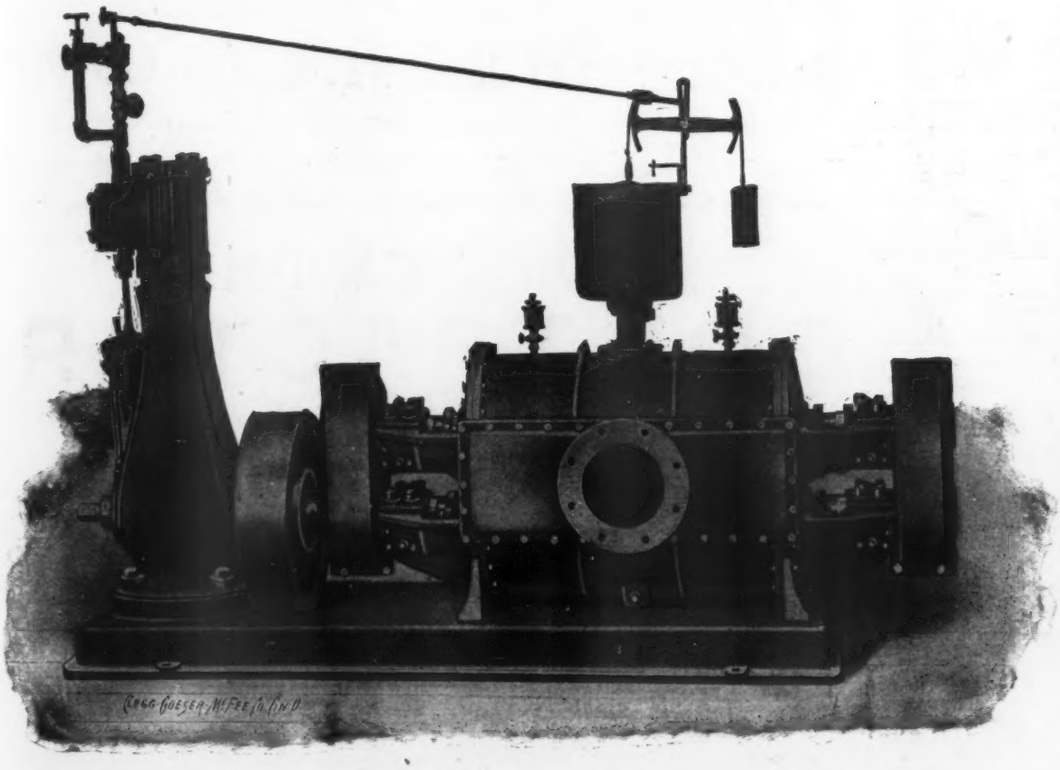

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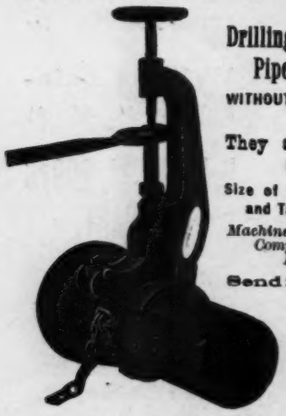

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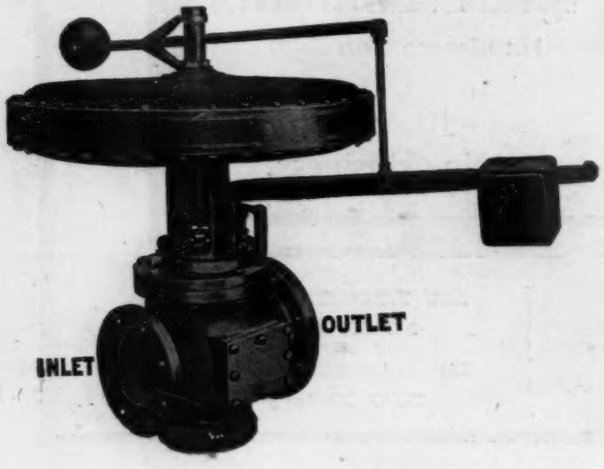

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PUBLIC LIGHTING TABLE.

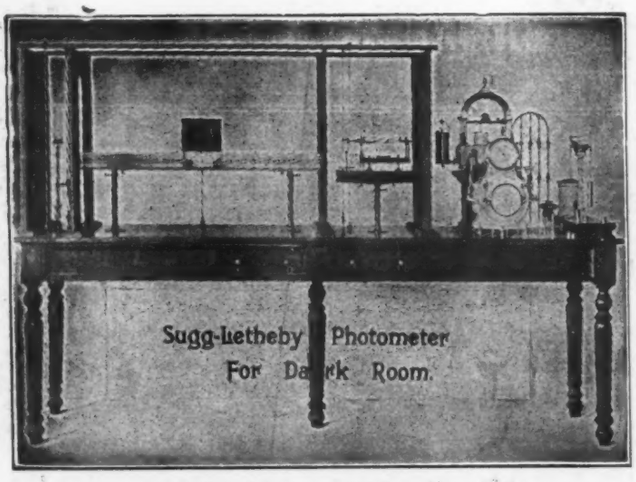
NOVEMBER, 1907.

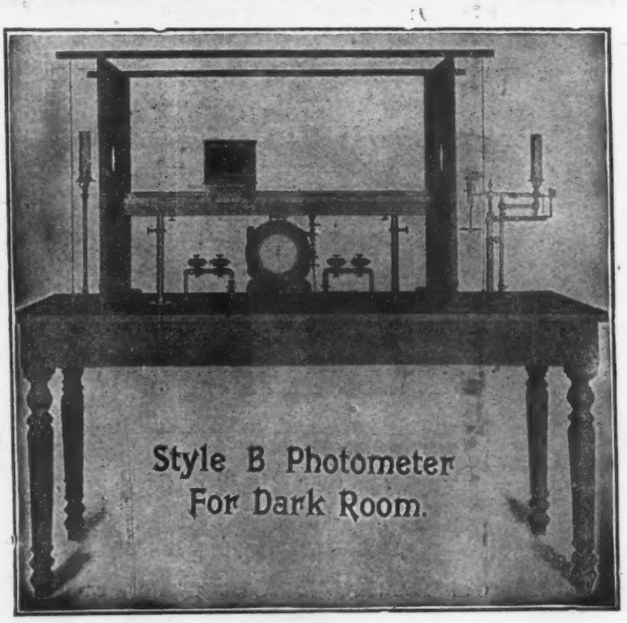
Day of Week.	Date.	Table No. 1. FOLLOWING THE MOON. Light.	Extinguish.
Fri.	1	5.30 PM	3.40 AM
Sat.	2	5.30	5.30
Sun.	3	5.20	5.30
Mon.	4	5.20	5.30
Tue.	5	5.20 NM	5.30
Wed.	6	5.20	5.30
Thu.	7	5.20	5.30
Fri.	8	5.20	5.30
Sat.	9	5.20	5.30
Sun	10	8.20	5.40
Mon.	11	9.20	5.40
Tue.	12	10.30 FQ	5.40
Wed.	13	11.40	5.40
Thu.	14	12.50 AM	5.40
Fri.	15	2.00	5.40
Sat.	16	3.00	5.40
Sun.	17	4.10	5.50
Mon.	18	No L.	No L.
Tue.	19	No L. FM	No L.
Wed.	20	No L.	No L.
Thu.	21	5.10 PM	7.00 PM
Fri.	22	5.10	7.50
Sat.	23	5.10	8.40
Sun.	24	5.10	9.30
Mon.	25	5.10	10.20
Tue.	26	5.10	11.20
Wed.	27	5.10 LQ	12.20 AM
Thu.	28	5.10	1.20
Fri.	29	5.10	2.20
Sat.	30	5.10	3.30

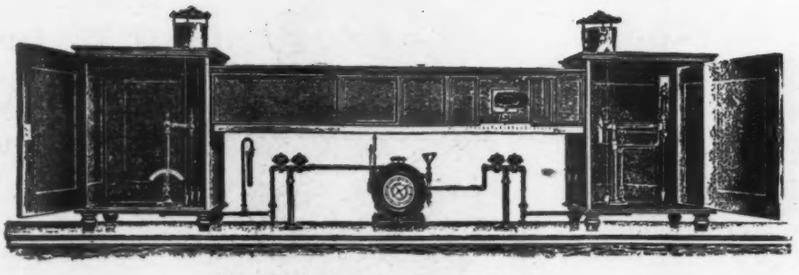
TOTAL HOURS DURING 1907.

By Table No. 1.

	Hrs.Min.
January	211.10
February	193.40
March	182.10
April	167.00
May	157.00
June	145.30
July	151.50
August	162.30
September	175.30
October	202.40
November	209.30
December	231.50
Total, yr.	2190.20







Closed Photometer For Light Room.

CIRCULARS SENT ON REQUEST.

PUBLIC LIGHTING TABLE.

NOVEMBER, 1907.

Day of Week.	Date.	Table No. 2. NEW YORK CITY. All Night Lighting. Light	Extinguish.
		P. M	A.M.
Fri.	1	4.45	5 35
Sat	2	4.45	5 35
Sun.	3	4 45	5.35
Mon.	4	4 45	5.35
Tue.	5	4 40	5.45
Wed.	6	4.40	5.45
Thu.	7	4 40	5 45
Fri.	8	4 40	5.45
Sat.	9	4 40	5.45
Sun.	10	4 40	5.45
Mon.	11	4 40	5.45
Tue.	12	4 30	6.00
Wed.	13	4 30	6 00
Thu.	14	4 30	6.00
Fri.	15	4 30	6 00
Sat.	16	4 30	6.00
Sun.	17	4.30	6.00
Mon.	18	4.30	6.00
Tue.	19	4 25	6 00
Wed.	20	4 25	6.00
Thu.	21	4.25	6.00
Fri.	22	4 25	6.00
Sat.	23	4 25	6.00
Sun.	24	4 25	6.00
Mon.	25	4.25	6.00
Tue.	26	4.20	6.10
Wed.	27	4 20	6.10
Thu.	28	4 20	6.10
Fri.	29	4.20	6 10
Sat.	30	4.20	6.10

TOTAL HOURS DURING 1907.

By Table No. 2.

	Hrs.Min.
January	423.20
February	355.25
March	355.35
April	298.50
May	264.50
June	234.25
July	243.45
August	280.25
September	321.15
October	374.30
November	401.40
December	433.45
Total, yr.	3987.45

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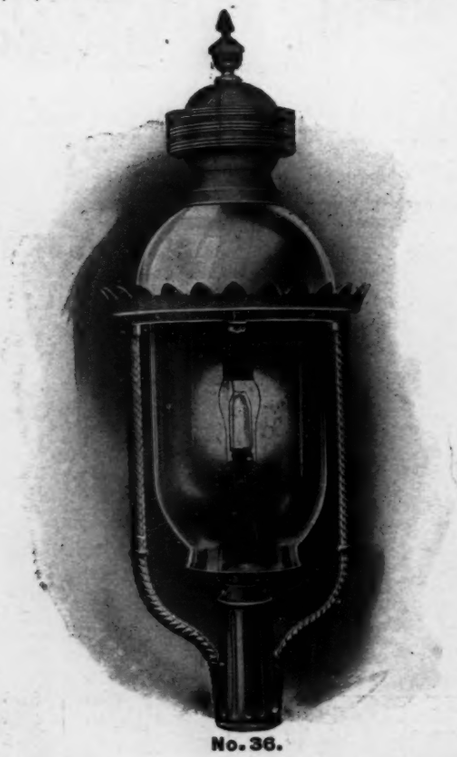

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Mexico, Mo.
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Syracuse, N. Y. (2d contract).
Atlanta, Ga. (3d contract).
Holyoke, Mass.
Peoria, Ills.
Schnectady, N. Y. (2d contract).
Danbury, Conn.
Galveston, Tex. (2d contract).
Quebec, Canada.
Indianapolis, Ind. (2d contract).
Bessemer, Ala.
Waterbury, Conn. (5th contract).
Sioux Falls, S. D. (3d contract).
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TOTAL SETS INSTALLED TO JULY 1, 1907, ... 34
TOTAL SETS TO DATE, ... 668
TOTAL DAILY CAPACITY, ... 541,655,000 cu. ft.

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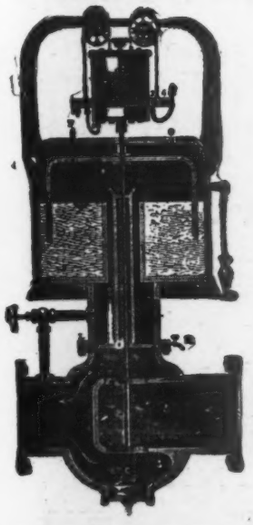

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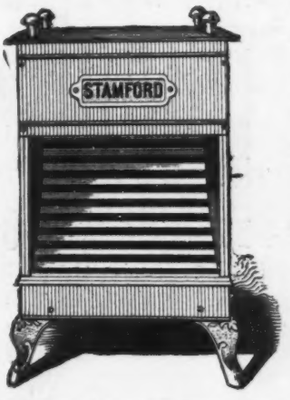

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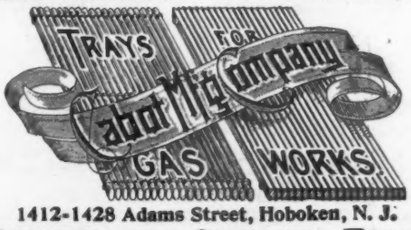

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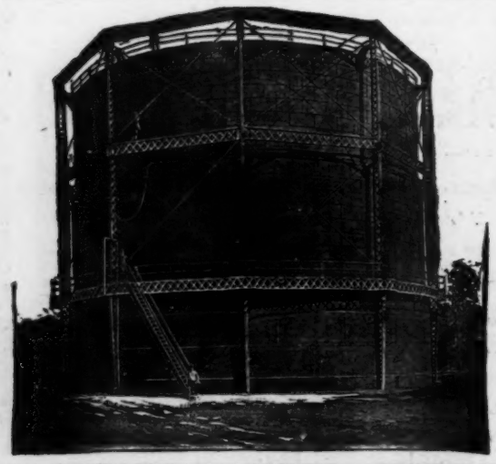

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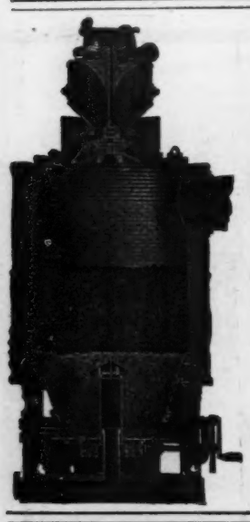

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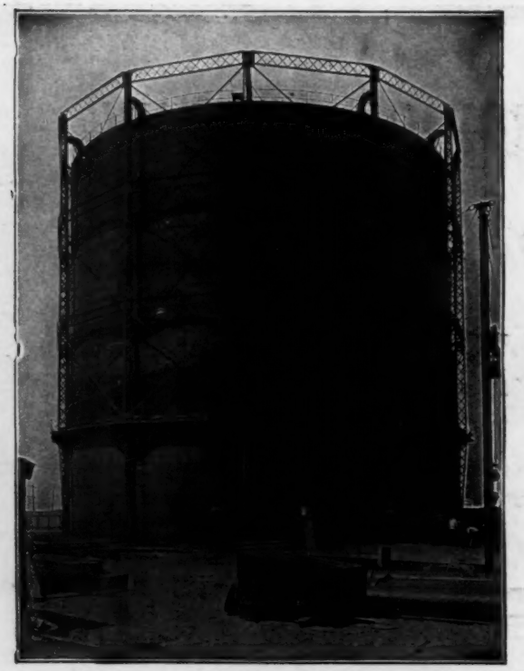

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